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Annual Meeting

The Annual Meeting of the Voting Members of the American Society for Psychical Research, Inc., was held on January 28, 1947, at the Rooms of the Society. The President, Dr. George H. Hyslop, presided at the Meeting. The following Members were present: Mrs. E. W. Allison, Mrs. Valentine Bennett, Mr. Arthur Goadby, Mrs. Lea Hudson, Mrs. Lawrence Jacob, Mr. Gerald L. Kaufman, Mrs. Richard L. Kennedy, Jr., Dr. Gardner Murphy, Miss Margaret Naumburg, Mr. William O. Stevens, Miss Gertrude O. Tubby, Mrs. Henry W. Warner, Mrs. E. D. Wenberg, and Mrs. John J. Whitehead, Jr.

The following Trustees were re-elected for a term of three years, ending January, 1950: Dr. George H. Hyslop, Mrs. Lawrence Jacob, Dr. Gardner Murphy, and Mrs. John J. Whitehead, Jr. Mr. Richard L. Kennedy, Jr. and Mr. William Oliver Stevens were elected Trustees of the Society to fill vacancies caused by the resignation of Mr. Lawson Purdy and Mr. H. Addington Bruce.

At the Meeting of the Board of Trustees, which took place immediately after the Annual Meeting, the following officers of the Society were elected for the year 1947: President, Dr. George H. Hyslop; First Vice-President, Dr. Gardner Murphy; Second Vice-President, Mrs. Lawrence Jacob; Treasurer, Mr. Richard L. Kennedy, Jr.; Secretary and Assistant Treasurer, Mrs. E. W. Allison.

At the Meeting of the Board of Trustees held on February 26, 1947, the President appointed the following Chairmen of Committees

to serve for the year 1947 and empowered them to select the members of their respective committees:

RESEARCH COMMITTEE:

Dr. Gardner Murphy, *Chairman*
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Mrs. Lawrence Jacob
Mrs. Richard L. Kennedy, Jr.
Miss H. R. Meade
Mrs. John J. Whitehead, Jr.

Obituary

Just before going to press we learned with deep regret of the death of Whately Carington, on March 2, 1947, at his home in Sennen Cove, Cornwall, England. A full appreciation of his work in psychical research will appear in the July issue.

Rorschach Variables in Relation to ESP Scores[1]

GERTRUDE R. SCHMEIDLER

Abstract: Nine ESP runs were conducted in college classrooms, by a group method, with each of 250 subjects. The Rorschach method of personality diagnosis, in the form of a group test, was administered to the same subjects. Using the Munroe Inspection Record as a criterion of adjustment, it was found that the well-adjusted tended to score above chance if they believed in the theoretical possibility of ESP, and below chance if they rejected this possibility, while the poorly adjusted, in both of these categories, scored about at chance. Finer analysis of Rorschach records found more specific indices of adjustment factors related to scoring success.

Introduction

While conducting the ESP experiments that have been reported in this JOURNAL (8, 9, 10, 11), I have often, looking at the data of subjects whom I knew, been tempted to say about a poor score, "Isn't that just like him?" or, "What could you expect?"

Talking to others who have worked in psychical research for many more years than I, and reading the speculations of veteran research workers, have strengthened my feeling that somewhere in the personality of the subject—if we could only put our finger on it!—lay a clue to his capacity for paranormal impressions in any specific situation.

Many examples have been given of psychics who do their best work under special conditions, or with certain sitters. But even with run-of-the-mill subjects, guessing at a half-mechanical task like the order of a deck of ESP cards, there seems to be the same sort of congruence between personality patterns and success.

Let me give some examples of the variety of patterns that may appear. One of my subjects was a gay young woman who had a great zest for anything that was "fun" and that offered a change, but who, at the same time, seemed unsure of herself; she gave the impression of reaching out to adventure and then pulling back to safety. She lived with her stable, highly respectable and domineering mother; and even in her early thirties, seemed still to be in a stage

[1] Dr. Gardner Murphy, Chairman of the A.S.P.R. Research Committee, has discussed with me every step of this procedure; and I should like to acknowledge here both my gratitude to him for his kindness and my great debt for his wise advice. The research reported here was begun in October, 1945, and has continued until the time of writing (February, 1947). Gathering, analyzing and interpreting this material comprised the greatest part of my work when Research Officer (Jan. 1946 to Feb. 1947) of this Society.

of adolescent revolt. During the time that I knew her, she accepted a responsible but poorly paid position and was extremely competent at it; but she left it after a year to take another position which was at least as difficult, and offered even less security. She married impulsively a man she hardly knew; and separated from him after only a few weeks. When I asked her to act as an ESP subject, she was delighted with the idea; arranged an appointment readily; entered into the spirit of the experiment; seemed to enjoy herself; and made an outstandingly high average. A short time later, feeling that perhaps she would be a "good" subject, I asked her to have another try at guessing the cards. This time she agreed with far less enthusiasm, and acted as subject only after repeated requests from me. This second time, her average was poor.

At that time, the drop in score puzzled me. If ESP scores reflected paranormal ability, then one might expect that a person who did very well in one session should do well in the next session too. Now, though perhaps this is only being wise after the event, the low scores in her second session seem, for this subject, a natural sequel to initial high scores. Both in her marriage and in her work, during the two years I knew her, she had entered a new field with great enthusiasm and achieved very quickly the results that she wanted. But she turned away from both as if there were something within her that prevented her from solid, long-term achievements; and in the same way she seemed half-afraid of ESP—after she had done so well at it as to imply that she might have real paranormal ability.

There was another subject who was something of a professional dilettante. In early middle age, he was still studying in a university, as he had been studying in universities for all his adult life. As soon as he approached competence in a field, he shifted to taking courses in another field; he knew enough about a great many subjects for brilliant showy conversation, but not enough for critical or creative scholarship. He had had paranormal experiences and was proud of them; when he heard that an ESP experiment was being conducted, he asked me if he might act as subject "to see if he could make a good score." I was delighted to find someone who actually wanted to be an ESP subject. But as we were discussing procedure, I began to get the impression that he meant literally what he had said: he wanted to show me that he could make a single high score. I suggested firmly that a high *average* was necessary with material like ESP cards; that long-sustained high scores were the only dependable kind. But there was some doubt in my mind as to whether he agreed with me out of conviction or merely out of courtesy. In the experiment, the scores on the first seven runs averaged only 4.4, but on the eighth run he scored twelve hits out of twenty-five. This was

the highest single score any of my subjects had yet obtained; and I made the mistake of telling him so. He was delighted; but his interest in the experiment dwindled visibly; his hits dropped to six out of twenty-five on the ninth run; and I could not persuade him to complete the ten runs of the session. Apparently an unsubstantial, but spectacular showing was enough for him in ESP as in his studies; it seemed as if he did not wish to maintain a high level of achievement, but only to show that he could reach it.

When I conducted group ESP experiments with students whom I had been teaching for several months, there were many whose ESP scores lay in the direction that I had expected. An attractive and competent girl, who contributed to classroom discussion without ever talking too much, whose grades varied between B and A, who was well-liked but never ran for college offices, had an ESP score that was above chance, but not spectacularly high. A thin, intense, serious young man, who was not very bright but worked so hard that he maintained a C average, and who conducted himself quietly and well, classified himself as a "goat"[2] and scored far below chance. There was a colorless, conservative young woman, who never spoke in class unless she was asked a question, who seemed to hold herself aloof from the other students and never showed a spark of interest in the subject matter of her routine, adequate papers. She classified herself as a goat, and scored at chance, with little variation from one run to the next, as if she had beeen holding herself aloof from the experiment, just as she did from other college activities.

Perhaps the most talkative of my students was a tall, fat, boy. Usually his comments were extremely apt; but it was clear that even when he had nothing to say, he would rather raise some irrelevant point or far-fetched criticism than be quiet for a whole class period. His gestures were awkward, and his clothes badly chosen. Most of his reports were outstandingly good, but occasionally he would submit a mediocre one. He was studying to be an accountant, but told me he wanted to be a doctor or a psychologist. He gave the impression of not being at peace with himself. He had too much "push" or drive; and seemed to be unable to use his ability effectively because he was trying too hard to make an impression, or to assert his independence, or to get ahead. When he emphasized to me, before the experiment, that he was very much interested in ESP, I felt sure that he would not be able to score well;

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2 "Goats" were the subjects who were convinced that ESP could not occur under the conditions of the experiment; "sheep" thought that ESP might occur. It was predicted that goats would score below chance at ESP, but that sheep would score above chance.

and in fact his scores were considerably below chance. A psychologist might call him "ego-involved" instead of "task-involved."

There were many other students whose ESP scores seemed to reflect their personalities; who seemed to handle the ESP situation in the same way that they handled the affairs of everyday life. With these impressions, reinforced by the opinions of so many veteran investigators of psychical phenomena, it seemed worth while to begin a large-scale study of the relationship between personality factors and paranormal ability.

The next question was the technical one of how to bring the problem from a vague personal hunch, supported by case studies (and hostile critics could always say to this, "But how about the cases you *didn't* describe?") to the scientific domain of demonstrable fact. We should have to have two objective tests: one of personality, and one of paranormal ability. If we administered these tests to large groups of subjects and found consistent, repeatable relationships between them, we should be on solid ground.

What tests should be made? Here there was real difficulty. What we wanted was clear enough; a good test should: (1) be easy to administer, so that we could collect enough cases to give a sound basis for generalization; (2) permit easy and objective scoring so that we could be sure of our data; (3) give a fair statement of what it aims to test (not like the earlier "personality tests," which actually showed, in many cases, only the subject's ability to outguess the examiner); (4) give more information about the problem than was needed for the particular point of inquiry, so that when we completed the research, we could have a broader perspective than when we began it.

It will hardly be necessary to say that the perfect test for either personality or paranormal ability has not yet been devised; that in evaluating tests for use in this research, it was necessary to balance weakness in some of these criteria against strength in others. Whenever time allowed, I have tried to give a "battery" of tests instead of a single one. But since there are good tests, even if not perfect ones, for both personality traits and paranormal ability, it seemed wiser to go ahead with the search than to wait for perfection.

The test for the paranormal which was used was the familiar one of guessing ESP symbols. This is not difficult to administer in a classroom; and scoring is objective. The question whether an ESP score affords a fair measure of a subject's telepathic or clairvoyant or precognitive ability is harder to answer. Perhaps no test can. Sometimes a striking report of a spontaneous case comes from a mature person who says that he has never had a similar experience; and subjects who make high scores in one Carington-type experi-

ment may make low scores in the next. Although such observations raise the problem whether any single test of paranormal ability will be valid, two factors argue in favor of continued use of ESP runs. The first is that various subjects have been reported who maintained high ESP scores for long periods of time, and also showed other signs of paranormal ability (2, 6, 7, 12); apparently for these subjects, ESP guesses are a valid test. In the second place, it was from experiments with ESP cards that this investigation emerged; and it seemed logical to continue with the same method.

Can we get any information from an ESP test in addition to the single figure representing a subject's total score? Other possibilities are present but limited, for the rich opportunities for symbolism or qualitative accuracy which other tests offer are almost entirely lacking. But we may look for displacement, as in the case of B. S., the subject who so often seemed to be guessing one ahead of his target (12), and the variation in score from one run (or one part of a run) to the next may be studied. Thus, while a series of ESP runs is not to be considered a completely satisfactory test of paranormal ability, it probably offers, by and large, the best possible test we can use, since its excellence in the first two test criteria overshadows its comparative weakness in the latter two.

In evaluating personality tests, the Rorschach (1, see also discussion in 5) seemed the best for our purpose. Running through the four criteria listed above, we find:

(1) There is an accepted, standard procedure for group administration. And though this procedure is time-consuming, taking about an hour, it is easy to find subjects for it because of widespread interest in the test.

(2) Scoring methods are probably the Rorschach's weakest point, because the scoring is slow, and depends to some (not completely determined) extent on the judgment of the examiner. We felt, however, that the scoring categories were sufficiently objective to make the test usable, especially with the safeguard against bias provided by the rule that scoring a subject's Rorschach must always be completed without knowledge of his ESP scores.

(3) The Rorschach is one of the best tests of personality, as evidenced by its increasingly wide use in clinic and college, and in the armed forces during the war, and by the growing number of psychologists who employ it. It compares favorably with such other valid tests as the Thematic Apperception Test, and is at present far more objective in its scoring.

(4) It essays to show the basic organization of the subject's personality structure, and thus gives extremely rich material for personality research. One of its outstanding characteristics is

that there are no "right" or "wrong" answers. Each subject can make of his responses the unique pattern which represents himself alone; and thus the data are not forced into predetermined and limiting patterns.

The problem of where to find subjects offered little choice. Ideally, we should have chosen two groups to be studied and contrasted: those who show much paranormal ability, and for a control, those who show little. But if we had tried to put this plan into practice, it would have taken many months to find enough subjects who think they have paranormal ability and who would be willing to take part in such an experiment; and then we should have had to take even more time to weed out of this group the ones who deceived themselves into claiming more of such ability than they had. A more practical approach was to make a random selection of subjects who were readily available, on the assumption that some would show considerable paranormal ability.

My own classes were always eager to take part in the experiment, and acted willingly as subjects. The plan of the research helped in enlisting other classes: several instructors in psychology felt that their students would gain enough from taking the Rorschach and having it interpreted to them, to justify the use of class time for research in parapsychology.[3] The number of subjects was limited only by my own capacity for giving these tests, since each individual Rorschach took, on the average, about half an hour to score.

Procedure

The data to be reported here were obtained in eleven group experiments, which gave a total of 303 usable records. One of these experiments was conducted by Gardner Murphy, using the members of his own class as subjects; three were performed by myself on my classes; and I conducted the remaining seven on classes borrowed for the occasion. All subjects were students in psychology in the New York City colleges. All experiments followed the same basic procedure and gave approximately similar results. They will be presented as a unit since it would serve no useful purpose to present them separately.

The procedure of these group experiments was parallel to the method that I have used with individual subjects and have already

[3] I am grateful to Mr. William Triebel for helping make the arrangements, and to Dr. Rudolf Ekstein, Dr. Genevieve Chase, Miss Edith Wladkowsky, Dr. Eugene Hartley, Miss Ruth Berenda and Miss Virginia Staudt, who cooperated so generously by giving me from two to five hours of their classes' time for this research.

reported in this JOURNAL (8, 9). Lists of 25 ESP symbols were made by an assistant, the order of the symbols being obtained by a random method of selection. These lists, used as targets by the subjects, were not known to me until after the guessing was completed. The person who made the lists, who alone had seen the order of the symbols, was never present at the experiment. The lists were concealed from the subjects until their guesses had been made. With all these precautions, there was no possibility of sensory cues to guide the correct guesses. The average number of correct guesses to be expected from each run was five.

The basic procedure, which all the separate experiments had in common, consisted of distribution of record sheets to the members of the class, and of a few introductory comments by the experimenter. The subjects were then told about the nature of the symbols, the number of guesses in a run, and the fact that three runs (75 guesses) should be taken as a unit. We emphasized the impossibility of "figuring out" the correct symbol by any intelligent method. Subjects were told to make guesses in sequence, rather than by skipping; and they were warned against changing a symbol once they had written it.

When they understood what was expected of them, each subject was asked, as in the earlier experiments, to characterize himself as a "sheep" or a "goat." A sheep was defined as a person who thought there might be some possibility of guessing the symbols with better than chance success; the goats were those who were convinced that any relationship between targets and guesses was coincidental. I made it a practice to draw a line on the blackboard, representing the continuum from *belief* that there would be a correspondence between guesses and targets, to *disbelief* in it. Labelling the center with a question mark, as shown below, I went on to say (in effect)

belief————?————disbelief

that of course the subjects to the left of the question mark should be called sheep. But by my definition, the subjects at the center, and even the ones toward the right of the continuum, were also sheep. It was only those *at the extreme right,* who had no reservation, and no shadow of doubt in their minds, who were goats.

For one class, I omitted to draw this continuum, and to give these final instructions. Such an extraordinarily large proportion of these subjects wrote "goat" at the top of the record sheet that I reexamined the procedure, remembered the omission, and in the next class period told them about it. Several of the "goats" said that they would have called themselves sheep under the full instructions. It

therefore seemed best to discard all the "goat" records from this class.

Once the subjects had written either "sheep" or "goat" after their names on the record sheets, they began their ESP guesses. When all had completed the first three runs, the envelope containing the target lists for these runs was opened, and the lists were read to the class. The subjects then guessed the fourth, fifth and sixth runs; and again when they were finished, the targets were read to them. We followed the same procedure for the seventh, eighth and ninth runs; and this completed the ESP experiment proper.

A group Rorschach Test was given (sometimes before, sometimes after, administration of the ESP test) to all these classes by projecting upon a screen ten slides corresponding in order to the ten cards used in the individual test. A booklet was provided each subject to record what he saw in the slides. In addition, various minor tests were given or questions asked of the students. It was hoped that these supplementary tests would serve two purposes: by such slight changes of procedure from one group to the next, the experiment would not become too much a matter of routine; and in addition, the tests might suggest hints about new directions for research. None of these supplementary tests have given sufficient data to justify a report, but some are promising enough to make me expect to continue using them.

All the Rorschach records of the subjects reported here were scored without knowledge of the results of the ESP runs, so that any bias of the experimenter cannot have affected the data. All ESP scores have been double-checked.

Results

The first question we put to the data was whether they confirmed our previous hypothesis about sheep and goats. We may call this:

Hypothesis I: Sheep will tend to make ESP scores above chance, and goats will tend to make ESP scores below chance.

This hypothesis has been fully discussed in previous articles (8, 9, 10, 11). Six experiments with individual subjects and one group experiment had already been performed and all had tended to confirm it. It is based on four premises: (1) that ESP occurs; (2) that a subject's attitude toward the ESP task (whether it be conscious or unconscious) will affect his scores; (3) that, by and large, subjects who believe that ESP may occur would like to make good scores in an ESP experiment; (4) that subjects who commit them-

selves before the experiment to the unqualified conviction that the idea of the experiment is nonsensical, will, by and large, hope to disprove the ESP hypothesis by their data, and will thus unconsciously aim at making incorrect guesses. (More sophisticated subjects, of course, would aim at the "chance" score of five successes in twenty-five guesses.)

Table I summarizes the data of all the students who participated in the current experiments, and who classified themselves as either sheep or goats. It shows a small difference in the predicted direction. The difference is marginally significant, and tends, as did all our previous research, to confirm the first hypothesis. We may speculate that these deviations are so much smaller than in the individual experiments because of the more impersonal atmosphere of the classroom, which—especially with a visiting experimenter—might make the students feel more remote from the situation; thus motivation for either high or low scores would be lessened, and the average would be nearer chance.

TABLE I

	SHEEP			GOATS		
	Subjects with no Rorschach	Subjects with Rorschach	Total	Subjects with no Rorschach	Subjects with Rorschach	Total
Number of Subjects	29	117	146	24	133	157
Number of Runs*	255	1049	1304	217	1197	1414
Deviation	+9	+111	+120	—21	—127	—148
Mean	5.04	5.11	5.09	4.90	4.89	4.90

* Although all subjects were asked to complete nine runs, there were a few who did not. Their records have been included, and thus the number of runs is not always nine times the number of subjects.

When we come to analysis of the Rorschach records, the richness of the material creates difficulties. One conventional method of listing the scoring categories for the Rorschach gives 66 items (1); and even this has been criticized for omitting some of the most important scores. It has seemed to me that it would be absurd to try to use so many categories when working with hundreds of records; and I have in general followed the much simpler scheme proposed by Dr. Ruth Munroe, which she calls the Rorschach Inspection Record (3).

But in addition to the mechanical listing of high and low scores for various categories, it is possible to approach the Rorschach from a more directed point of view: to put specific questions to a record, such as, "How well-adjusted is this subject?" or: "Does he respond freely to new situations, or does he look for security by restricting himself to a narrowly conventional, 'correct' approach?"

This is, in part, what I have done. On the basis of each group of experiments, new hypotheses presented themselves as to conditions for high or low ESP scores. Subsequent experiments would give an opportunity to test each such theory; and they in turn would give rise to new ones. The Rorschach material will therefore be presented from two points of view: whether it confirms an impression that grew out of previous work (Tables II and III) and whether the cruder listing of items brings new points into prominence (Tables IV and V and Appendices I, II, and III).

The reader may remember that some of the subjects described earlier in this report were students in my classes. These classes, tested in the spring of 1945, were all given Rorschachs as well as ESP tests, and it was from comparison of these records that our second hypothesis arose. (The data are not cited here because I had seen the ESP scores of the students before scoring the Rorschachs, and there might, therefore, have been bias in the Rorschach scoring.) It seemed to me that many of the badly adjusted students made extremely poor ESP scores (*i.e.*, near chance expectation), while most of the well-adjusted youngsters did nicely (*i.e.*, the sheep scored above chance and the goats scored below chance) in the ESP tests. The second hypothesis, therefore, is:

> *Hypothesis II*: Sheep who are well-adjusted will, on the average, make higher ESP scores than sheep who are not; and goats who are well-adjusted will have lower ESP scores than the other goats.

It is fortunate that a single Rorschach score for good or poor adjustment has recently been devised by Dr. Munroe (3, 4). It is derived, essentially, by listing some twenty significant Rorshach categories, and giving one or more checks to each, whenever a subject deviates from "normal" in that category. Adding up a subject's checks gives a summary statement of how deviant he is in these more diagnostic categories; and thus the total of checks is probably as good an indicator of his adjustment as any one figure, obtained from a single test, could be.

But where does good adjustment stop, and bad adjustment begin? Any such boundary is arbitrary and subject to considerable error; but I have set it (following certain implications of Dr. Munroe's

discussion) at a point which divides the group into approximately a ratio of 5:3 for well-adjusted in relation to poorly-adjusted.[4] This may seem rather severe to our college population, and, of course, does not imply that the Rorschach predicts that three out of eight students will be sent to prison or a mental hospital, or otherwise come to a bad end. But perhaps it is not too far out of line to say that at least a third of the students are so mixed up in their own problems that they are likely to approach a new, non-compelling situation like a class ESP experiment from a highly personal point of view. Thus we could not expect them to accept without reservation the simple motivation of the experimenter's "Now try to guess the list!" nor even the implied motivation of "Now prove by your failure that the experiment is a lot of nonsense!" And if the subjects who are preoccupied with their own difficulties do not accept such motivation, we get a clearer differentiation between sheep and goats when those cases are omitted.

TABLE II

Summary of ESP scores according to Hypothesis II: that well-adjusted sheep will make higher ESP scores than poorly-adjusted sheep, and that well-adjusted goats will make lower ESP scores than poorly-adjusted goats.

	SHEEP		GOATS	
	Well-adjusted	Poorly-adjusted	Well-adjusted	Poorly-adjusted
Number of Subjects	74	43	83	50
Number of Runs	665	384	746	451
Deviation	+108	+3	—159	+32
Mean	5.16	5.01	4.79	5.07

When scores of well-adjusted sheep and well-adjusted goats are compared, C.R. diff = 3.55; P = .0002.

This in fact occurs. Table II shows the ESP scores of well-adjusted and poorly-adjusted sheep and goats. Poorly-adjusted sheep scored almost exactly at chance (Mean = 5.01); poorly-adjusted goats were slightly above chance (Mean = 5.07). Thus

[4] The criterion actually used was ten checks or less for good adjustment, and eleven checks or more for poor adjustment. This number was determined on the basis of the subjects from the spring of 1945, and we may therefore take the entire current series of data as a test of the second hypothesis.

the entire negative deviation of the goats of Table I, and virtually the entire positive deviation of the sheep, was contributed by the well-adjusted subjects. The difference between the well-adjusted sheep and the well-adjusted goats is highly significant statistically.

Although it is always gratifying to have an experiment come out as predicted, these data offered no temptation to look at Hypothesis II as a final statement of the problem of ESP. There was a staggering number of individuals whose scores did not follow the general trend. This would, I think, have been predicted by anyone who had studied psychical phenomena. We might say about a sensitive that no one could expect her to give a good sitting during a certain period because at that time she was so disturbed by her personal worries (and this would correspond to the poor ESP scores of the subjects whose Rorshachs showed personality difficulties). But no one would suggest that good psychiatric adjustment should be the crucial test of a successful psychic, and just as surely our data do not mean that all subjects who are well adjusted will score better than chance at ESP and that all maladjusted subjects must score badly.

I suggest, therefore, that we interpret Hypothesis II with due caution, and with proper reservations. We are entitled to say that evidence from a fairly large number of cases suggests that well-adjusted subjects tend to get good (*i.e.*, non-chance) ESP scores. But then we should add that this rule applies to groups, and does not predict that each individual well-adjusted subject will score well. In addition, there is the difficulty that "good adjustment" refers to a complex pattern of behavior which is not easy to define, and which will vary from one situation to the next. Perhaps certain aspects of good adjustment are significant for us, and others are irrelevant. In other words, this hypothesis offers, at best, only a first approximation to a theory of personality in relation to the paranormal.

As for the second aspect of these same data: the average ESP score of the subjects with poor adjustment was not far from chance. Does this mean that subjects with poor personality adjustment show no paranormal ability? Or does it imply that some will do well and others will do badly, making it impossible to predict about the group as a whole?

My own impression is that the latter alternative comes closer to the truth; and that we should be able to separate high-scorers from low-scorers in the poorly adjusted group when we know more about them. Two contrasting cases come to mind to support this point, both relating to subjects who, at the time of the experiment, were college sophomores with severe personality problems.

The one with poor ESP scores was a very quiet youngster, whose voice seldom rose above a whisper and whose handwriting was tiny

and cramped. He dressed neatly; he came to class on time; his grades were good; and his surface adjustment was adequate. But he was an unhappy, dissatisfied boy, unsure of his ability or his choice of a career, whose self-restraint was so excessive that it seemed to hamper him at every turn. Perhaps it would not be too far from the truth if we guessed that the factors of restraint related to his maladjustment, also kept him from the paranormal contacts required for success in ESP.

The other boy was as untidy as the first was neat. He was considered brilliant, and had a talent for poetry that won the respect of his professors. But he seemed at the mercy of his impulses, doing such unpredictable things as emptying a glass of water over a girl who made a joke that annoyed him, or leaving college for a week while classes were in session because he wanted to see an art exhibit in another city. The freedom with which he flung himself into activity, and with which he gave scope to his creative powers, was extraordinary; was it also a condition for the release of paranormal ability? Whatever the reason, in spite of his undoubted poor adjustment, his ESP scores were high and he reported spontaneous telepathic experiences.

But to return to our Rorschach. As the first batch of data was being tabulated, it seemed to me that there was a very large number of exceptions to the rule that good adjustment was tied with good ESP scores; and also that a particularly large number of these exceptions had the personality trait that psychologists call "constriction." This might show itself in a variety of ways, through all of which runs a common thread of extreme self-control; a constricted person might have a colorless personality, or a highly conventional, over-correct approach to problems, or he might be inflexible. Constriction is defined in the Rorschach in terms of an unusually high percentage of responses that rely exclusively on the formal aspects of the material; the usual formula is to say that a record which contains half, or more than half, of such "F" responses is constrictive ($F\% \geqq 50\%$).

This impression of the frequency of poor ESP scores among constricted subjects led to the formulation of a refinement of the previous theory, namely:

> *Hypothesis III*: Well-adjusted and non-constricted sheep will tend to have higher ESP scores than sheep who are poorly-adjusted or constricted; and well-adjusted, non-constricted goats will tend to have lower ESP scores than goats who are poorly-adjusted or constricted.

This hypothesis is based on the data collected before May, 1946.

Table III will present separately the cases obtained before and after the theory was stated.

TABLE III

Summary of ESP scores according to Hypothesis III: that well-adjusted and non-constricted sheep will tend to have higher ESP scores than sheep who are poorly-adjusted or constricted; and that well-adjusted, non-constricted goats will tend to have lower ESP scores than goats who are poorly-adjusted or constricted.

A. Sheep

	Well-adjusted and non-constricted			Poorly adjusted and/or constricted		
Date of Expt.	Oct. '45 to Apr. '46	July '46	Total	Oct. '45 to Apr. 46	July '46	Total
No. of S's	29	29	58	40	19	59
No. of Runs	261	260	521	357	171	528
Dev.	+102	+52	+154	—23	—20	—43
Mean	5.39	5.20	5.30	4.94	4.88	4.92

B. Goats

	Well-adjusted and non-constricted			Poorly adjusted and/or constricted		
Date of Expt.	Oct. '45 to Apr. 46	July '46	Total	Oct. '45 to Apr. '46	July '46	Total
No. of S's	25	49	74	33	26	59
No. of Runs	224	441	665	298	234	532
Dev.	—69	—90	—159	+33	—1	+32
Mean	4.69	4.80	4.76	5.11	5.00	5.06

When ESP scores of the well-adjusted, non-constricted sheep and goats of the July, 1946 series, are compared, C.R. diff = 3.33; P = .0004.

Only ten of the subjects of the July group were both constricted and well-adjusted; and, of course, this number is too small to offer an adequate test of the relation of constriction to ESP success. Out of the ten subjects, the five sheep scored exactly at chance, but the five goats scored below chance (Dev. = —21; M = 4.76). These first data must, therefore, be considered ambiguous in respect to constriction, although they tend to confirm Hypothesis III as it was stated.

There were indications in the July records that the third hypothesis had been stated too narrowly and that two additional factors

should be included as contra-indicators for ESP. One of these factors implies a rigidity or self-restraint in the subject's use of his own creative ability. This score is given if more than half of the M (human movement) responses are like the frozen movement of a statue, or the tensed position of a person who is poised but motionless. Munroe indicates the score as "Mr" where "r" stands for "rigid."

The other factor which seemed prominent in these records was the "quantity ambition" or intellectual ambition of many of the subjects who had low ESP scores. This refers, not to ambition as such, but to *intellectual* ambition, a kind of showing-off, or forcing one's ideas forward. It is indicated by a large number of responses, and I have set the criterion number at 30 or higher in the group record (where time of administration is limited) and at 50 or higher in the individually administered protocol.

When so many factors appeared, in a cursory examination of the Rorschach scores, to have a possible relation to ESP success, it was obvious that a more systematic examination would be needed. I therefore made a table which is summarized in Appendix I, listing each of the Rorschach scores and the ESP score for each of the 250 subjects described in this report. The summary table gives the ESP average and certain other data for the various Rorschach scores.

Glancing down the right-hand column (ESP Mean) in this Appendix table, it is obvious that there is a hodgepodge of high and low ESP scores in which it is difficult to see a pattern. I have attempted to find some order in this confusion by pulling out of the table the subjects whom we expect to have poor scores. In a first attempt, for example, all cases which showed poor adjustment or constriction were excluded, and the table was reconstructed with the records of the remaining subjects. The poor ESP scores of the subjects whose Rorschachs showed either $R \geqq 30$ (thirty or more responses) or Mr (rigid movement) then suggested another reconstruction of the table. I drew it up again with those cases omitted. After several such jugglings, in which various categories were taken out or put back in, the table presented in Appendix II emerged. This table represents my final attempt until more data are available. None of the intermediate forms are presented here.

In this final listing, seven categories have been selected as showing an association with poor ESP scores. They include the three described above, two others which may have a logical association with them, and a pair which seem to represent a contrasting personality pattern. The four new items are:

Total Movement $\geqq 60\%$, *i.e.*, an extremely large percentage of responses describing movement. Such a score is taken to mean an extremely active "inner life." It may carry something of the same significance for our purposes as "quantity ambition." Both have the connotation that a subject may force himself to have ideas even in situations where it would be better for him to be relaxed instead of working so hard.

Absence of both color shock and shading shock (evidence of emotional shock when confronted with color and shading). Under Munroe's generous definition, such absence of shock means that a subject is remarkably passive or unmoved under conditions to which most people will respond more strongly. Like constriction, or rigidity of thinking, it implies a tendency to shut oneself off from experiences instead of being a willing participant in them.

C+ and CF+ (response to color without use of form, and response to color dominant over form), the last two scores, are based on an over-reaction to color at the expense of form. They imply extreme impulsiveness.

These seven categories tend to be associated with poor ESP scores, even in the records where one of these appears without the other six categories (Appendix III).

Decision as to which factors to include in this list depended on two considerations: how many subjects with a certain Rorschach score had poor ESP scores; and how poor the ESP scores were. Thus, when the only subject who showed very marked shading shock also did very badly at ESP, it seemed an inadequate basis for concluding that marked shading shock indicates poor paranormal ability. And again, when the twenty-four subjects with checks for "K,k" (undifferentiated shadings) had ESP averages that were low but in the predicted direction, it seemed safer *not* to draw any conclusion from their low mean scores.

It will be noted that when we exclude the records in which any of these seven scores occur, the remaining poorly-adjusted subjects score about as well in ESP as do the well-adjusted ones (for maladjusted sheep, Mean = 5.39 and for maladjusted goats, Mean = 4.86). This listing of specific factors, relating to *specific maladjustment,* offers therefore an alternative to Hypothesis II, relating to *total maladjustment.*

Two difficulties in the listing will occur to the reader. One is the point already mentioned: the doubtful categories, for which the scores are so few or so ambiguous that we cannot be sure whether the item should be used even provisionally as an indicator of poor ESP scores. The other difficulty is the uncertainty that attends

every research hypothesis: we cannot be sure, until we have more cases, whether any of our apparent relationships are due only to coincidence. With these points in mind, I can offer only as extremely tentative the following hypotheses.

Hypothesis IV: Sheep who are well-adjusted, not constricted, not inclined to impose rigid barriers on their creative thinking and not needing to impress others with their intellectual prowess, will tend to have higher ESP scores than other sheep. Goats with these characteristics will tend to make lower ESP scores than other goats.

TABLE IV

Summary of ESP scores according to Hypothesis IV: that sheep who are well-adjusted, not constricted, not inclined to impose rigid barriers on their creative thinking and not needing to impress others with their intellectual prowess, will have higher average ESP scores than other sheep. Goats with these characteristics will make lower average ESP scores than other goats.

	SHEEP		GOATS	
	Subjects expected to have high ESP scores according to Hypothesis IV	Other subjects	Subjects expected to have low ESP scores according to Hypothesis IV	Other subjects
No. of S's	44	73	62	71
No. of runs	396	653	557	640
Deviation	+167	—56	—173	+46
Mean	5.42	4.91	4.69	5.07

But if we summarize the tables presented in Appendix II and Appendix III, an alternative hypothesis would do as well, namely:

Hypothesis V: Sheep who are not constricted, not inclined to impose rigid barriers on their creative thinking, responsive to change, not needing to impress others with their intellectual prowess, not too overactive in their inner life, and not overimpulsive, will have higher average ESP scores than other sheep; and goats with these characteristics will tend to have lower ESP scores than other goats.

TABLE V

Summary of ESP scores according to Hypothesis V: that sheep who are not constricted, not inclined to impose rigid barriers on their creative thinking, responsive to change, not needing to impress others with their intellectual prowess, not too overactive in their inner life, and not over-impulsive, will have higher average ESP scores than other sheep; and goats with these characteristics will tend to have lower ESP scores than other goats.

	SHEEP		GOATS	
	Subjects expected to have high ESP scores according to Hypothesis V	Other subjects	Subjects expected to have low ESP scores according to Hypothesis V	Other subjects
No. of S's	51	66	71	62
No. of runs	459	590	638	559
Deviation	+204	—93	—175	+48
Mean	5.44	4.84	4.73	5.09

Hypotheses IV and V are equally appropriate at this writing; they make equivalent separations of ESP scores, and only further research can decide between them. But because it is more specific, the latter may, if it is verified, be more fruitful. It indicates that any one of three patterns is unfavorable to good classroom ESP scores: extreme intellectuality, extreme impulsiveness, or extreme reserve. This is susceptible to experimental test, both with the Rorschach and with other methods. Like every other working hypothesis, it is by such tests that it must eventually stand or fall.

Meanwhile, it may find some support from the impressions of mediumistic sittings. Many investigators feel that a psychic sometimes receives an isolated, accurate scrap of information. If she impulsively jumps to a conclusion about its meaning, and reports that conclusion, she may be wrong. Perhaps it was such impulsive over-interpretation of impressions which made some of the CF+ subjects (over-reacting to color) get such poor ESP scores?

The other two terms, "intellectual" and "reserved," must have a curiously familiar ring to many readers. It is well-known that certain mediums find these qualities unwelcome in their sitters; and the uncharitable suggest that it is because the reserved and intellectual person is the one most likely to detect fraud. But if the data of this report are substantiated, the other possibility emerges: that these two traits, carried to an extreme, have the deterrent effect

on paranormal contact that so many psychics have been assigning to them for so long.

Summary

The Rorschach test of personality and ESP tests were given to 250 college students. Relationships between personality patterns and success in the ESP tests were described in the form of five hypotheses. The first three hypotheses proposed have been supported by the later investigations. Further research is needed to provide an independent test of the later hypotheses.

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Appendix I

ESP scores of subjects whose Rorschach records deviated from the average in certain significant categories.

A. Sheep

Rorschach Category*	Rorschach Criterion*	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Number of R	$\geqq 30$	21	188	—33	4.82
Refusal	✓	0	—	—	—
"	✓ ✓	3	27	—7	4.74
W	+	29	261	+100	5.38
"	++	7	63	—11	4.83
"	+++	2	18	—19	3.94
"	- or - -	3	27	+3	5.11
"	BV or VB	7	63	+20	5.32
"	V	6	54	+15	5.28
"	B	0	—	—	—
Dd	+	7	63	—3	4.95
"	++	1	9	—3	4.67
S	+	10	90	+18	5.20
"	++	2	18	+3	5.17
Suc	1	3	27	+3	5.11
P	-	11	99	+11	5.11
O	BV or VB	4	36	—21	4.42
"	B	11	99	+11	5.11
"	V	1	9	—1	4.89
At, Sex	+	25	224	+50	5.22
"	++	5	45	—14	4.69
Range	-	26	234	—11	4.95
"	- -	6	54	+12	5.22
"	+	2	18	+5	5.28
"	(a)† -	3	27	—12	4.56
"	(b)† -	7	63	—15	4.76
"	(c)† -	21	189	—6	4.97
"	(c) - -	6	54	+12	5.22
"	(d) -	0	—	—	—

* These listings follow the criteria proposed by Munroe (3) except for R and total number of checks, where Munroe does not give any limiting number.

† (c) overlaps somewhat with (a), (b), and (e). When a subject's scores could be listed in either of two categories, they were included in both categories for this breakdown. In the summary, the subject was, of course, counted as only one case.

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Range	(e)†-	2	18	+7	5.39
(H + A):					
(Hd +Ad)	<2:1	8	72	+6	5.08
F%	+	20	180	—27	4.85
"	++	1	9	+3	5.33
"	-	7	63	+33	5.52
"	--	0	—	—	—
F	BV or VB	9	81	+3	5.04
"	B	2	18	+2	5.11
"	V	6	54	+7	5.13
"	E	3	27	+1	5.04
Shading Shock	None	30	270	+46	5.17
"	⌐	76	680	+60	5.09
"	⌐ ⌐	10	90	+18	5.20
"	⌐ ⌐ ⌐	1	9	—13	3.56
"	-	5	45	±0	5.00
"	--	1	9	+7	5.78
"	+	27	239	+35	5.15
"	++	8	72	+10	5.14
Fc	-	17	153	+30	5.20
"	--	8	69	+15	5.22
c	+	6	54	+19	5.35
"	++	1	9	—2	4.78
C'	+	7	63	±0	5.00
"	++	1	9	+1	5.11
K, k	+	19	171	+20	5.12
"	++ or +++	3	24	+12	5.50
M	+	13	117	—17	4.85
"	++ or +++	4	38	+1	5.03
"	-	23	207	+90	5.43
"	--	10	90	—15	4.83
"	B	1	9	+6	5.67
"	rd	2	18	+11	5.61
"	r	10	90	—21	4.77
"	d	1	9	+14	6.56
FM, FM: M	+	18	162	+10	5.06
"	++	6	54	—4	4.93
"	+++	1	9	±0	5.00
"	-	6	54	—31	4.43
"	--	0	—	—	—
m	+	29	261	+70	5.27
"	++	3	27	—3	4.89
Total Movement	+	50	449	+66	5.15
"	++ or +++	8	72	—27	4.62
"	-	1	9	+6	5.67
"	--	0	—	—	—

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Color Shock	none	24	216	+44	5.20
"	✓	76	683	—16	4.98
"	✓ ✓	17	150	+83	5.55
"	-	10	90	+14	5.16
"	- -	1	9	+11	6.22
"	+	33	296	—34	4.89
"	++	10	87	+28	5.32
Color Shock and	none	6	54	—8	4.85
Shading Shock	✓	38	342	+93	5.27
"	✓ ✓	51	458	—8	4.98
"	✓ ✓ ✓	19	168	+26	5.15
"	✓ ✓ ✓ ✓	3	27	+8	5.30
FC	-	24	216	+48	5.22
"	- -	19	168	—5	4.97
"	B	7	63	+9	5.14
CF, CF: FC	-	24	216	+34	5.16
"	+	14	123	—51	4.59
"	++ or +++	3	27	+9	5.33
C>1, Cn	+, ++, or +++	3	27	+8	5.30
Total Color	+	11	98	—10	4.90
"	++	3	27	+14	5.52
"	-	18	162	—21	4.87
"	- -	12	108	+39	5.36
Color: Movement	-	28	249	+32	5.13
"	- -	28	252	+21	5.08
"	- - -	14	126	—5	4.96
"	- - - with U	2	18	+11	5.61
"	+	2	18	+16	5.89
"	++	0	—	—	—
"	+++	0	—	—	—
Total Number of Checks	0 - 10	74	665	+116	5.17
"	11 - 24	43	384	—5	4.99
Total		117	1049	+111	5.11
B. Goats					
Number of R	$\geqq 30$	12	108	+7	5.06
Refusal	✓	3	27	—3	4.89
"	✓ ✓	5	45	—10	4.78
W	+	36	325	—9	4.97
"	++	8	72	+8	5.11
"	+++	3	27	+5	5.19
"	- or - -	4	36	+6	5.17
"	BV or VB	7	63	+30	5.48
"	V	4	36	+12	5.33
"	B	1	9	+3	5.33

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Dd	+	9	80	—12	4.85
"	++	1	9	+12	6.33
S	+	13	117	—5	4.96
"	++	0	—	—	—
Suc	1	3	27	+7	5.26
P	—	29	262	±0	5.00
O	BV or VB	4	37	+15	5.41
"	B	9	81	—2	4.98
"	V	6	54	+22	5.41
At, Sex	+	26	234	—45	4.81
"	++	9	81	+24	5.30
Range	-	37	334	—46	4.86
"	--	1	8	—11	3.62
"	+	1	9	+11	6.22
"	(a)*-	6	54	—13	4.76
"	(b)*-	5	46	+6	5.13
"	(c)*-	26	235	—33	4.86
"	(c) --	1	8	—11	3.62
"	(d) -	1	9	+7	5.78
"	(e)*-	3	27	—8	4.70
(H +A):					
(Hd + Ad)	<2:1	9	81	—16	4.80
F%	+	17	153	+7	5.05
"	++	0	—	—	—
"	-	8	73	+11	5.15
"	--	1	9	—8	4.11
F	BV or VB	7	63	+13	5.21
"	B	4	36	+6	5.17
"	V	9	90	—1	4.99
"	E	4	36	—5	4.86
Shading Shock	None	48	433	+16	5.04
"	✓	76	683	—137	4.80
"	✓ ✓	9	81	—6	4.93
"	✓ ✓ ✓	0	—	—	—
"	-	7	63	—15	4.76
"	--	2	18	—5	4.72
"	+	41	368	—104	4.72
"	++	4	36	±0	5.00
Fc	-	28	253	—5	4.98
"	--	10	90	+3	5.03
c	+	9	81	+7	5.09
"	++	0	—	—	—

* (c) overlaps somewhat with (a), (b), and (e). When a subject's scores could be listed in either of two categories, they were included in both categories for this breakdown. In the summary, the subject was, of course, counted as only one case.

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
C′	+	13	117	+4	5.03
"	++	1	9	+6	5.67
K, k	+	22	198	+20	5.10
"	++ or +++	2	18	—2	4.89
M	+	25	225	—26	4.88
"	++ or +++	3	27	—22	4.19
"	-	16	144	—25	4.83
"	- -	14	127	+19	5.15
"	B	2	18	—6	4.67
"	rd	4	36	—1	4.97
"	r	8	72	+25	5.35
"	d	3	27	—7	4.74
FM, FM : M	+	13	117	—18	4.85
"	++	6	54	+6	5.11
"	+++	1	10	+9	5.90
"	-	16	144	—9	4.94
"	- -	7	63	—15	4.76
m	+	27	242	—5	4.98
"	++	4	36	±0	5.00
Total Movement	+	62	557	—57	4.90
"	++ or +++	3	27	—22	4.19
"	-	0	—	—	—
"	- -	1	9	+4	5.44
Color Shock	none	23	207	+16	5.08
"	◡	85	765	—106	4.86
"	◡ ◡	25	225	—37	4.84
"	-	15	135	—62	4.54
"	- -	3	27	—21	4.22
"	+	26	234	—9	4.96
"	++	10	90	—26	4.71
Color Shock and Shading Shock	none	10	91	+14	5.15
"	◡	40	359	+33	5.09
"	◡ ◡	61	549	—154	4.72
"	◡ ◡ ◡	21	189	—26	4.86
"	◡ ◡ ◡ ◡	1	9	+6	5.67
FC	-	19	170	+5	5.03
"	- -	22	198	—26	4.87
"	B	8	72	—8	4.89
CF, CF : FC	-	39	350	—52	4.85
"	+	6	54	—22	4.59
"	++ or +++	4	37	+9	5.24
C>1, Cn	+, ++ or +++	6	54	+20	5.37
Total Color	+	18	163	—8	4.95
"	++	2	18	+14	5.78
"	-	16	144	—30	4.79

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Total Color	- -	10	90	+1	5.01
Color : Movement	-	39	350	—68	4.81
"	- -	19	171	—30	4.82
"	- - -	15	135	—12	4.91
"	- - - with U	2	18	+7	5.39
"	+	0	—	—	—
"	++	0	—	—	—
"	+++	1	9	+4	5.44
Total Number of Checks	0 - 10	83	746	—159	4.79
"	11 - 24	50	451	+32	5.07
Total		133	1197	—127	4.89

Appendix II

ESP scores of subjects whose Rorschach records do not show any of the following items: (1) R $\geqq$ 30; (2) F%+; (3) rigid M; (4) no color shock or shading shock; (5) Total Movement++, (6) CF+; (7) C+.

A. Sheep

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Refusal	✓	0	—	—	—
"	✓ ✓	3	27	—7	4.74
W	+	19	171	+98	5.57
"	++	2	18	+5	5.28
"	+++	0	—	—	—
"	- or - -	1	9	+6	5.67
"	BV or VB	3	27	+18	5.67
"	V	0	—	—	—
"	B	0	—	—	—
Dd	+	2	18	+12	5.67
"	++	0	—	—	—
S	+	3	27	+24	5.89
"	++	0	—	—	—
Suc	1	1	9	±0	5.00
P	-	1	9	+20	7.22
O	BV or VB	0	—	—	—
"	B	2	18	+10	5.56
"	V	0	—	—	—
At, Sex	+	9	81	+42	5.52
"	++	2	18	±0	5.00
Range	-	11	99	+44	5.44
"	- -	4	36	+18	5.50

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Range	+	0	—	—	—
"	(a) -	1	9	−3	4.67
"	(b)* -	3	27	+6	5.22
"	(c)* -	9	81	+41	5.51
"	(c) - -	4	36	+18	5.50
"	(d) -	0	—	—	—
"	(e)* -	1	9	+12	6.33
(H + A):					
(Hd + Ad)	<2:1	1	9	−3	4.67
F%	-	2	18	+25	6.39
"	- -	0	—	—	—
F	BV or VB	2	18	+17	5.94
"	B	1	9	+5	5.56
"	V	1	9	+5	5.56
"	E	0	—	—	—
Shading Shock	none	15	135	+88	5.65
"	′	32	288	+122	5.42
"	′ ′	3	27	+7	5.26
"	′ ′ ′	1	9	−13	3.56
"	-	3	27	+6	5.22
"	- -	1	9	+7	5.78
"	+	18	162	+67	5.41
"	++	2	18	±0	5.00
Fc	-	10	90	+59	5.66
"	- -	2	18	+7	5.39
c	+	1	9	+14	6.56
"	++	1	9	−2	4.78
C′	+	4	36	+7	5.19
"	++	0	—	—	—
K, k	+	8	72	+11	5.15
"	++ or +++	0	—	—	—
M	+	5	45	+31	5.69
"	++ or +++	2	18	+19	6.06
"	-	15	135	+60	5.44
"	- -	2	18	−9	4.50
"	B	1	9	+6	5.67
"	rd	1	9	−2	4.78
"	d	1	9	+14	6.56
FM, FM: M	+	7	63	+23	5.37
"	++	2	18	+8	5.44
"	+++	1	9	±0	5.00
"	-	1	9	+2	5.22
"	- -	0	—	—	—

* (c) overlaps somewhat with (b) and (e). When a subject's scores could be listed in either of two categories, they were included in both categories for this breakdown. In the summary, the subject was, of course, counted as only one case.

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
m	+	13	117	+76	5.65
"	++	2	18	+5	5.28
Total Movement	+	29	261	+108	5.41
"	-	0	—	—	—
"	--	0	—	—	—
Color Shock	none	12	108	+32	5.30
"	⌐	29	261	+117	5.45
"	⌐ ⌐	10	90	+55	5.61
"	-	5	45	+28	5.62
"	--	1	9	+11	6.22
"	+	8	72	+13	5.18
"	++	4	36	+3	5.08
Color Shock and Shading Shock	⌐	25	225	+117	5.52
"	⌐ ⌐	17	153	+70	5.46
"	⌐ ⌐ ⌐	8	72	+19	5.26
"	⌐ ⌐ ⌐ ⌐	1	9	—2	4.78
FC	-	9	81	+47	5.58
"	--	6	54	+14	5.26
"	B	3	27	+29	6.07
CF, CF: FC	-	18	162	+51	5.31
Total Color	+	3	27	—1	4.96
"	++	1	9	+9	6.00
"	-	8	72	+11	5.15
"	--	7	63	+18	5.29
Color: Movement	-	13	117	+70	5.60
"	--	16	144	+62	5.43
"	---	6	54	+24	5.44
"	--- with U	1	9	±0	5.00
"	+	1	9	+10	6.11
"	++	0	—	—	—
"	+++	0	—	—	—
Total Number of Checks	0-10	38	342	+158	5.46
"	11 - 24	13	117	+46	5.39
Total		51	459	+204	5.44
B. Goats					
Refusal	⌐	3	27	—3	4.89
"	⌐ ⌐	3	27	—13	4.52
W	+	19	171	—23	4.87
"	++	2	18	—6	4.67
"	+++	2	18	+2	5.11
"	- or --	0	—	—	—
"	BV or VB	3	27	+20	5.74

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
W	V	2	18	—4	4.78
"	B	0	—	—	—
Dd	+	4	35	—27	4.23
"	++	0	—	—	—
S	+	6	54	—6	4.89
"	++	0	—	—	—
Suc	1	1	9	—4	4.56
P	-	14	126	—14	4.89
O	BV or VB	2	18	+5	5.28
"	B	6	54	±0	5.00
"	V	3	27	—4	4.85
At, Sex	+	11	99	—39	4.61
"	++	3	27	±0	5.00
Range	-	23	207	—52	4.75
"	--	1	8	—11	3.62
"	+	0	—	—	—
"	(a) -	3	27	—28	3.96
"	(b)* -	4	36	+2	5.06
"	(c)* -	14	126	—32	4.75
"	(c) --	1	8	—11	3.62
"	(d) -	1	9	+7	5.78
"	(e)* -	3	27	—8	4.70
(H + A):					
(Hd + Ad)	<2:1	3	27	—29	3.93
F%	-	5	45	+9	5.20
"	--	0	—	—	—
F	BV or VB	2	18	+9	5.50
"	B	3	27	—1	4.96
"	V	4	36	—9	4.75
"	E	1	9	—9	4.00
Shading Shock	none	21	189	—38	4.80
"	✓	46	413	—120	4.71
"	✓ ✓	4	36	—17	4.53
"	✓ ✓ ✓	0	—	—	—
"	-	3	27	—1	4.96
"	--	2	18	—5	4.72
"	+	29	260	—70	4.73
"	++	1	9	—10	3.89
Fc	-	12	108	—21	4.81
"	--	4	36	—15	4.58
c	+	3	27	+2	5.07
"	++	0	—	—	—
C'	+	7	63	—16	4.75

* (c) overlaps somewhat with (b) and (e). When a subject's scores could be listed in either of two categories, they were included in both categories for this breakdown. In the summary, the subject was, of course, counted as only one case.

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
C'	++	1	9	+6	5.67
K, k	+	14	126	—16	4.87
"	++ or +++	2	18	—2	4.89
M	+	18	162	—37	4.77
"	++ or +++	2	18	—16	4.11
"	-	9	81	—32	4.60
"	- -	3	27	±0	5.00
"	B	0	—	—	—
"	rd	2	18	+3	5.17
"	d	1	9	—9	4.00
FM, FM : M	+	5	45	—5	4.89
"	++	3	27	—3	4.89
"	+++	0	—	—	—
"	-	9	81	—34	4.58
"	- -	5	45	—11	4.76
m	+	12	107	—29	4.73
"	++	4	36	±0	5.00
Total Movement	+	43	386	—72	4.81
"	-	0	—	—	—
"	- -	1	9	+4	5.44
Color Shock	none	7	62	—18	4.71
"	⌐	50	450	—114	4.75
"	⌐ ⌐	14	126	—43	4.66
"	-	6	54	—11	4.80
"	- -	1	9	—5	4.44
"	+	16	144	—52	4.64
"	++	6	54	—25	4.54
Color Shock and Shading Shock	⌐	21	188	—26	4.86
"	⌐ ⌐	39	351	—119	4.66
"	⌐ ⌐ ⌐	11	99	—30	4.70
"	⌐ ⌐ ⌐ ⌐	0	—	—	—
FC	-	9	80	—7	4.91
"	- -	11	99	—48	4.52
"	B	3	27	—5	4.81
CF, CF : FC	-	24	215	—75	4.65
Total Color	+	9	81	—18	4.78
"	++	0	—	—	—
"	-	10	90	—25	4.72
"	- -	3	27	—21	4.22
Color : Movement	-	26	233	—91	4.61
"	- -	10	90	—14	4.84
"	- - -	6	54	—24	4.56
"	- - - with U	0	—	—	—
"	+	0	—	—	—

Rorschach Category	Rorschach Criterion	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
Color : Movement	++	0	—	—	—
"	+++	1	9	+4	5.44
Total Number of Checks	0-10	50	449	—148	4.67
"	11 - 24	21	189	—27	4.86
Total		71	638	—175	4.73

Appendix III

ESP scores of subjects whose Rorschach records show only one of the following items: (1) R $\geqq$ 30; (2) F%+; (3) rigid M; (4) no color shock or shading shock; (5) Total Movement++; (6) CF+; (7) C+.

A. Sheep

Rorschach Item Which is Present	Number of Subjects	Number of ESP Runs	ESP Deviation	ESP Mean
R $\geqq$ 30	12	107	—23	4.79
F% +	9	81	—2	4.98
Rigid M	5	45	—13	4.71
No Color Shock or Shading Shock	4	36	—4	4.89
Total Movement ++	4	36	—6	4.83
CF +	9	78	—20	4.74
C +	1	9	+11	6.22

B. Goats

R $\geqq$ 30	7	63	—7	4.89
F% +	10	90	—6	4.93
Rigid M	4	36	+23	5.64
No Color Shock or Shading Shock	7	63	+5	5.08
Total Movement ++	9	81	+12	5.15
CF +	7	63	—4	4.94
C +	4	36	+18	5.50

The Psychokinetic Effect: Further A.S.P.R. Experiments[1]

L. A. DALE and J. L. WOODRUFF

Abstract: Three series of dice-throwing experiments, designed in the hope of shedding light on the hypothesis that mind may directly influence matter, were carried out at the A.S.P.R. between May and December, 1946. In the first series, which involved 24 subjects and 13,824 single die-throws, apparatus was used which permitted the dice to fall at a distance of approximately 100 feet from subject and experimenters. In the second series, in which 54 subjects took part and in which 31,104 single die-throws were recorded, work was done with the simpler equipment which had yielded positive results in an earlier experiment. In the third series, the principal variable was the introduction of an ESP task at the same session. This series also made use of 54 subjects and in it 31,104 single die-readings were recorded. The results of all the series were close to chance expectation. The purpose of the present report is to put on record *all* the formal PK research that has been carried out at the Society since publication of the first report (1).

Introduction

There appeared in the July, 1946, issue of this JOURNAL a paper by one of the present writers describing an experimental investigation into the problem of the "psychokinetic effect," or, as it is popularly called, "mind over matter" (1). This investigation was an extension (and a verification) of earlier work reported by Dr. J. B. Rhine and his associates in the *Journal of Parapsychology,* beginning with the March, 1943, issue of that publication. Papers on psychokinesis (PK), one of them confirmatory (2), have appeared in the *Proceedings* of the (London) Society for Psychical Research (3, 4, 5).

These investigations have been concerned with the general problem of determining whether the mind can to a measurable degree influence the "behavior" of matter. This is the psychokinetic, or PK, hypothesis. Basically, the method of approaching the problem has been the same for all investigators. Certain inanimate objects—most frequently dice, but in some cases disks or coins—have been placed in motion and an attempt has been made to control by the exertion of "will" on the part of human subjects the position in which these

[1] These experiments were carried out with the approval of Dr. Gardner Murphy, Chairman of the A.S.P.R. Research Committee.

objects will come to rest. Statistics of probability indicate whether these inanimate objects have fallen according to "chance" or whether something more than chance is at work. Since many of the published reports (1, see Bibliography) have yielded results which cannot readily be explained on the chance hypothesis, investigators have been concerned with other alternative hypotheses. Before extrachance results can be taken as evidence of the operation of PK, it is necessary to rule out the possibility that the results obtained can be attributed to such factors as faulty dice or disks, inaccurate observation, or errors in recording the faces of dice or disks. Such factors seem to have been adequately controlled in most of the published investigations.

Beyond the problems of verification and the control of experimental conditions lies another area of experimental interest. If the existence of psychokinesis can be demonstrated, it is likely that it will show up more strikingly under some conditions than under others. One final goal of any research program might well be to attempt a determination of the conditions necessary for the maximum demonstration of the PK effect.

The first A.S.P.R. experiment (hereinafter referred to as "Series I") carried out by Dale was concerned with each of these three areas of experimental interest: (a) the possibility of obtaining evidence for the existence of PK; (b) the careful control of experimental conditions in order to rule out alternative explanations of positive results, and (c) the discovery of certain conditions and relationships necessary for a maximum demonstration of PK.

The present report, which encompasses three separate series of experiments, is also concerned with these problems. All data bearing on the PK hypothesis which have been obtained since the publication of the first report are included in this paper without regard to the question whether or not they offer confirmatory evidence for the existence of PK. The three series are differentiated on the basis of chronology, experimental conditions, and the specific problems being investigated. The results obtained from the three series are essentially of a "chance" nature—that is, they give no clear-cut evidence of the operation of PK—although one or two suggestive trends will be indicated in the discussion of the separate series. These series will be characterized as Series IIa, IIb, and IIc. Because of the chance nature of the results, a lengthy discussion is not called for.

Series IIa

Problem: This series was concerned with the major problem of determining the differential effect produced on PK scoring by the

introduction of the factor of distance into the experimental situation. The only published report dealing with the distance variable in PK testing is that of C. B. Nash (6), who compared scoring levels of subjects at three and thirty feet from the dice. Positive results were obtained under distance conditions, but since the experimenter remained at all times near the dice (and the experimenter may have been the one who was mentally influencing the dice), the test in the opinion of the present writers was not an adequate one. In Series IIa equipment was used which ensured that both subjects and experimenters were at all times at the prescribed distance from the dice.

Methodology and Procedure: Twenty-four female subjects took part in this series. Only female subjects were used because of the findings of the first A.S.P.R. experiment, in which women maintained a higher level of scoring than did men. The women were for the most part college students, and were paid at the rate of a dollar an hour. Prizes were offered for superior scoring. Sixteen of these subjects had participated in the first A.S.P.R. psychokinesis experiment (Series I).

Forty-eight white commercial dice, with scooped-out black spots, 5/8 inches on a side, were used. The randomizing chute used in the first A.S.P.R. experiment was again employed, although certain major alterations and elaborations were made. The chute itself is three feet six inches long, five inches wide, and four inches deep. There are 55 baffles and it is covered over by a glass strip. The original mouth of the chute was removed and a larger one substituted. Within this new mouth a trap door was constructed which could be opened electrically by activating a solenoid by means of pressing a small switch. The switch was fastened to the end of an extension cord approximately 110 feet in length. In this way the trap door (and the dice resting upon it) could be released while experimenters and subject stood at a distance of approximately 100 feet from the chute. A platform 23 inches by 24 inches was constructed 4 feet 8 inches above the dice box. It was supported by four legs nailed to the corners of the dice box. Through an aperture four inches square in the platform a Mercury II camera was mounted. In this way pictures could be taken of the dice after they came to rest. In order to furnish the necessary illumination two flood reflectors were attached to the platform in such a way that light from the Photoflood bulbs was directed on the dice.

Each of the twenty-four subjects was used for one session only. As soon as the dice had been released by the subject's manipulation of the switch which activated the solenoid and released the trap door, the flood lights were turned on and a photograph of the dice

was taken. Immediately after this each of the experimenters (J. L. W. and L. D.), as well as the subject, silently counted the number of dice showing the face that had been "willed for" by the subject. If there was not unanimous agreement as to the number of "hits," one of the experimenters isolated the correct faces from the rest of the dice and another count was made. (The photographs furnished a permanent record for recheck.) The two experimenters and the subject then recorded the score obtained for the throw on their record sheets, all three persons having been provided with a set of such sheets. This recording and photographing procedure was the same for all subjects, whether in "distance" or "same-room" conditions.

A "throw" consisted of the simultaneous release of 48 dice. Each subject made two "throws" for each of the six die faces: One, Two, Three, Four, Five, and Six. Thus ninety-six dice were thrown for each die face. Since the experiment was discontinued after twenty-four subjects had participated (the original plan had called for 54 subjects), the completion of the systematic rotation of die faces used in Series I was not possible. Although each die face was thrown for an equal number of times, fours, fives, and sixes were not thrown for as the *first* target face in the series as was done in the first investigation.

Alternate subjects were used in "distance" and in "same-room" conditions. In the distance experiments the dice were gathered by one of the experimenters, placed in a cup held by the subject, who then poured them into the mouth of the chute on top of the fastened trap door. The two experimenters and the subject then walked approximately 100 feet down a hall and into a room at the end of it. At her discretion the subject then pushed the switch which released the dice. The return trip to the first room was made and the photographing and recording procedure was carried out as described above. The dice were then scooped up by one of the experimenters, placed in the mouth of the chute by the subject, and the walking procedure was repeated. Since each of the six die faces was "thrown for" twice, twelve round trips were made by each subject and by the experimenters. The "same-room" conditions varied from the "distance" conditions only in that the dice were released by the subject while she was sitting next to the apparatus.

Results: The following tables give the essential results. No extra-chance effects are noted. Insofar as possible the analyses carried out were those which yielded significant results in Series I.

TABLE I

Results of PK experiment IIa in terms of total deviation from chance expectation (distance and same-room conditions combined)

N (in single die-throws)	13824
Hits obtained	2299
Hits expected	2304
Deviation	— 5
SD	±43.81

TABLE II

Comparison of scores obtained under distance versus same-room conditions

	Distance conditions	Same-room conditions
N (in single die-throws)	6912	6912
Hits obtained	1137	1162
Hits expected	1152	1152
Deviation	—15	+10
SD	±30.98	±30.98

CR/d (distance versus same-room) negligible

The distribution of hits on the six faces of the dice as targets is shown in Table III. It will be noted that significantly more hits were made on the three higher faces of the dice (CR = 2.9); since there is no other evidence of the operation of PK in the data, this can best be attributed to mechanically biased dice.

TABLE III

Distribution of hits on the six faces of the dice as targets

	One-face	two-face	three-face	four-face	five-face	six-face	Total
No. of hits	375	344	365	418	405	392	2299
Deviation	—9	—40	—19	+34	+21	+8	—5

It was mentioned above that two "throws" (48 dice per throw) were made for each die face, the results of these throws being recorded in two boxes numbered I and II upon a single record sheet. In Series I an orderly decline in rate of scoring occurred from Run I to Run IV on the record page (a "run" there consisting of six throws of four dice). In the experiment now under discussion a comparison was made of hits occurring on Throw I and Throw II

in order to see if similar decline effects were operating. The data of Table IV show that no decline phenomena were present.

TABLE IV

Comparison of scores obtained on Throw I and Throw II (on each of the six record sheets)

	Throw I	Throw II
N (in single die-throws)	6912	6912
Hits obtained	1136	1163
Hits expected	1152	1152
Deviation	—16	+11
SD	±30.98	±30.98

CR/d (Throw I—Throw II) negligible

Discussion: Since the data of Experiment IIa are of a chance nature elaborate discussion is not necessary. It may be well to point out, however, that results which are not statistically significant sometimes suggest the direction in which future research should go. Experiment IIa differs from Series I in a number of important respects, and some of these may have bearing on the difference in the results obtained from the two series. The number of experimenters was increased from one to two; the number of dice simultaneously thrown was increased from four to forty-eight. Because of the number of dice used per throw in Series IIa, elaborate methods of photographing and recording were deemed advisable to insure adequate experimental safeguards. The introduction of the distance variable itself may have been important. In this connection it may be noted that "distance" conditions yielded a deviation of minus fifteen and "same-room" conditions a deviation of plus ten. Since the difference is statistically insignificant, no special importance should be attached to the direction of this difference, but it can be considered in setting up further research plans. These and other factors may have been important in determining the chance nature of our results. (In Appendix I the total scores and deviations obtained by the twenty-four subjects in Series IIa are presented.)

Series IIb

Problem: In this series we were concerned with duplicating, if possible, both the psychological and the physical conditions which had obtained in Series I, and which may have been relevant in producing the extrachance results noted. It was felt that the elaborate mechanical controls and "gadgetry" in Series IIa may have militated against the demonstration of PK. Therefore in Series IIb there

was a trend toward the less elaborate, but still adequately safeguarded conditions of the first published series. Series IIb was set up in such a way that most of the statistical analyses which were made in Series I could be made here too.

Methodology and Procedure: Fifty-four female subjects took part in this experiment. (This is a deviation from the conditions of Series I, in which 29 women and 25 men were used.) The subjects were roughly of college age, most of them being students at Hunter College. Some of them had participated in earlier PK series. The subjects, who took part in one session only, were paid at the rate of a dollar an hour, and prizes were offered for "high" scoring.

Use was made of 6 commercial dice, red in color with scooped-out white spots, and 5/8 inches on a side. (This is also a deviation from Series I, in which only four dice were employed.) The randomizing chute and the dice box were the same as used in Series I. The chute is three feet six inches long, five inches wide, four inches deep, and covered by a glass strip. There are 55 baffles which serve the purpose of disturbing the free fall of the dice. The measurements of the box into which the dice fall from the chute are eighteen and one half inches by twelve inches. The record sheets were the same as used in the first series (1, see p. 127). They allow for the recording of four runs of 24 die-throws each.

The subjects threw six dice simultaneously; four throws of the six dice constituted a run.[2] Four runs were made (and recorded on a single record sheet) for each of the six faces of the die as target; thus each subject when she had completed her task had filled out a set of six record sheets. The order of target faces thrown for was rotated in orderly fashion, and thus each face was not only represented an equal number of times as target, but was also thrown for in a given position an equal number of times.

The dice were scooped up and placed in a dice cup held by the subject by that one of the two experimenters who sat on the floor next to the dice box. The subject then dumped the dice from the cup into the mouth of the chute. After they came to rest in the dice box, the experimenter who sat above the dice box on a divan called out the die faces and the other experimenter and the subject checked on the accuracy of the call. (It was felt that subjects not experienced in working with dice would be unable to handle the problem of accurately recording six dice.) The two experimenters and the subject then recorded the six die faces on individual record

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[2] Work at Duke University has standardized a "run" in PK as 24 single die readings.

sheets. At the end of each run of 24 die readings the number of "hits" was checked by the three participants and recorded in the allotted space on the record sheet.

Results: With but one exception the results obtained in Series IIb deviate insignificantly from the results expected by "chance." In Series I one analysis indicated that there was a tendency for positive scoring to concentrate on the last three record sheets of the session regardless of the die face being thrown for (1, p. 137). Although this "improvement through the session" trend was not statistically significant in the first experiment, it interested the experimenters and they were on the watch for it to reoccur in the present experiment. Table VIII shows that the trend did reoccur. The critical ratio of 2.27 is significant at the two per cent level, indicating that a difference of this size is to be expected only twice in a hundred series of comparable length. A glance at the other tables, however, will show the essentially "chance" nature of the results as a whole.

TABLE V

Results of PK experiment IIb in terms of total deviation from chance expectation

N (in single die-throws)	31104
Hits obtained	5123
Hits expected	5184
Deviation	—61
SD	±65.72

TABLE VI

Distribution of hits on the six faces of the dice as targets

	One-face	two-face	three-face	four-face	five-face	six-face	Total
No. of hits	854	837	828	826	877	901	5123
Deviation	—10	—27	—36	—38	+13	+37	—61

Reference to Table VI shows that the total deviation obtained on the three higher faces of the dice was positive, while the total deviation yielded by the three lower faces was negative. This favoring of the higher faces, however, is not statistically significant, as it was in the case of Series IIa. It will be recalled that the dice used in the two experiments were not the same.

TABLE VII

Comparison of scores obtained on Runs I, II, III, and IV (of each of the six record sheets)

	Run I	Run II	Run III	Run IV
N (in runs)	324	324	324	324
Hits obtained	1292	1296	1240	1295
Hits expected	1296	1296	1296	1296
Deviation	—4	±0	—56	—1
SD	±32.86	±32.86	±32.86	±32.86

CR/d (I-II versus III-IV) negligible

In this experiment there is no evidence for the operation of PK in terms of deterioration of scoring rate as the subject progresses along the record page, as there was in Series I.

TABLE VIII

Comparison of scores obtained on pages 1-6 of each subject's work

	Page 1	Page 2	Page 3	Page 4	Page 5	Page 6
Hits obtained	837	827	823	843	888	905
Hits expected	864	864	864	864	864	864
Deviation	—27	—37	—41	—21	+24	+41

CR/d (pp. 1-2-3 versus 4-5-6) 2.27

As in the case of Series I, the "split-half" method of estimating reliability was applied to the data of Series IIb. A non-significant positive correlation was found between scores deriving from subjects' odd-numbered record sheets and those from the even-numbered sheets. Thus no evidence for the operation of PK derives from the results of this test. (In Appendix II the total scores and deviations obtained by the fifty-four subjects are presented.)

Discussion: Series IIb yielded only one result which was suggestively positive. The effect of this positive result, as shown in Table VIII, is minimized when it is realized that it is but one analysis selected from several that were made. The fact, however, that the result is in the predicted direction (that is, in the direction of the result obtained in Series I) must be taken into consideration.

It is of course not possible to explain why positive results comparable to those obtained in the first series were not obtained in the experiment just described. There were, it is true, a number of differences in the objective experimental conditions of the two series: In Series I there was one experimenter, four dice were thrown, both male and female subjects were employed, and it was chronologically the first PK experiment carried out at the A.S.P.R. In Series IIb

there were two experimenters, only female subjects were used, and it followed immediately upon an experiment in which only chance results were obtained (Series IIa described above). It is probable, however, that the important difference between the successful and the unsuccessful series lies not in the objective experimental conditions but in more subtle psychological factors which have yet to be determined. It is clear that an attempt to reproduce *objective* experimental conditions does not necessarily lead to the reproduction of the same *psychological* conditions. As far as the series just described is concerned, the results seem to indicate that we were not successful in reproducing the psychological variables which were important in Series I.

Series IIc

Problem: In this series, which was carried out by only one of the present writers (L. D.), it was hoped that light would be shed on the question of the relation (if any) between psychokinesis and extrasensory perception. It is currently held that PK and ESP are closely related abilities of human personality (7), and there is much *indirect* evidence to support this view; but it seemed that a direct experimental approach to the problem was needed. The specific question, then, asked in Series IIc was "Does the subject who tends to do well in an ESP task also tend to do well in a PK task?" It was also hoped that some clarification of the role of the experimenter in possibly bringing about the PK results (1, pp. 142-145) might be forthcoming, since the experimental plan provided for the experimenter's doing the ESP task, and her scores as well as those of the subjects were to be correlated with the PK scores obtained at the same session. Finally, the hypothesis that women are better PK subjects than men was to be tested. An attempt was made to keep objective conditions as much as possible similar to those obtaining in the first experiment, the principal variable being the introduction of an ESP task in the same session.

Methodology and Procedure: The subjects were 54 college students, 32 women and 22 men. They were paid at the rate of a dollar an hour, and none took part in more than one session. Some, however, had taken part in earlier PK series. A cash prize was offered to subjects scoring "high" on the PK task (no rewards were offered for the ESP task).

The dice used were four commercial dice, red with scooped-out white spots. These same four dice, with two additional from the same box, were used in Series IIb discussed above. The randomizing chute and dice box have been fully described in the published account

of Series I, and further described in this paper on p. 71. The record sheet, the same as used in Series I and Series IIb, allowed for the recording of four runs of 24 dice per run.

When he arrived, the subject was shown the PK apparatus and was told that he would be asked to do some dice-throwing later in the session. Then the ESP task was explained. Both the subject and the experimenter (L. D.) guessed the order of six decks of ESP cards which were concealed in six opaque white boxes laid out on a table. Subject and experimenter made their guesses by writing down the supposed order of the concealed symbols on standard ESP record sheets. Scores were not checked until the completion of the PK task; at this time the six boxes were opened and the subject's and experimenter's guesses were compared with the actual card order. (Since neither significant ESP results nor significant correlations between ESP and PK scores were obtained, it is not necessary to describe the many safeguards that were taken in preparing and recording, etc., the ESP material.[3])

The PK task was carried out in exactly the same fashion as in Series I. Four dice were thrown from a dice cup down the randomizing chute. Each subject performed four runs (96 single die-readings) for each die face as target, filling in all six record sheets, one for each die face. As before, the order of target faces was systematically rotated so that each die face was not only thrown for an equal number of times but was also represented with equal frequency as first, second . . . or last target face in the session. Subject and experimenter each kept an independent record of each die face that turned up. In the case of a discrepancy between number of hits recorded by subject and experimenter, the lower score was taken as official. (In this series there were only five such discrepancies.) In all, then, 1296 PK runs (31,104 single die readings) were performed by the subjects and 648 decks of ESP cards were guessed by subjects and experimenter.

Results: Analyses of the PK and ESP data of Series IIc indicate the "chance" nature of the results. Since, as stated above, there was no evidence of significant relationships between PK and ESP scores obtained at the same session, the results of the two tasks will be presented separately in the tables below. The PK material will be dealt with first.

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[3] We wish to thank Miss Dorothy Buck, the Assistant Secretary, for preparing and recording the 648 decks of ESP cards which were used in this experiment.

TABLE IX

Results of experiment IIc (PK task) in terms of total deviation from chance expectation

N (in single die-throws)	31104
Hits obtained	5162
Hits expected	5184
Deviation	—22
SD	±65.72

TABLE X

Distribution of hits on the six faces of the dice as targets

	One-face	two-face	three-face	four-face	five-face	six-face	Total
No. of hits	810	818	906	866	895	867	5162
Deviation	—54	—46	+42	+2	+31	+3	—22

The familiar picture of dice favoring the higher faces again emerges from the data of Table X, although it should be pointed out that the greatest positive deviation was obtained on the three-face.

TABLE XI

Comparison of scores obtained on Runs I, II, III, and IV (of each of the six record sheets)

	Run I	Run II	Run III	Run IV
N (in runs)	324	324	324	324
Hits obtained	1254	1290	1313	1305
Hits expected	1296	1296	1296	1296
Deviation	—42	—6	+17	+9
SD	±32.86	±32.86	±32.86	±32.86

CR/d (I-II versus III-IV) negligible

The data of Table XI show a reversal of the striking decline effect from first to last run on the record sheet found in Series I. The "improvement" of scoring on Runs III and IV in the present data is without statistical significance.

TABLE XII

Comparison of scores obtained on pages 1-6 of each subject's work

	Page 1	Page 2	Page 3	Page 4	Page 5	Page 6
Hits obtained	841	876	866	856	851	872
Hits expected	864	864	864	864	864	864
Deviation	—23	+12	+2	—8	—13	+8

CR/d (pp. 1-2-3 versus 4-5-6) negligible

Reference to Table XII shows that the statistically suggestive tendency for positive scoring to concentrate upon the last three record sheets found in Series IIb (see Table VIII) does not manifest itself in the present series.

The hypothesis that women are better PK subjects than men was not sustained. Table XIII shows that both men and women subjects scored at a chance level.

TABLE XIII

Comparison of scores obtained by male and female subjects

	Female Ss (32)	Male Ss (22)	Total (54)
N (in runs)	768	528	1296
Hits obtained	3062	2100	5162
Hits expected	3072	2112	5184
Deviation	—10	—12	—22
SD	±50.43	±41.81	±65.72

CR/d (F-M) negligible

Application of the "split-half" method of estimating reliability showed a non-significant negative correlation between PK scores deriving from subjects' odd-numbered record sheets and those from the even-numbered sheets. To summarize, then, all the analyses applied to these PK data indicated that they did not differ significantly from chance expectation.

The ESP data will now be briefly described. (In Appendix III are presented the total scores and deviations obtained in the PK task by the 54 subjects, and the total ESP scores and deviations obtained by the subjects and the experimenter.) Pooling subjects' and experimenter's scores on the 648 decks called, the over-all deviation was plus 70. This positive deviation yields a CR of 1.36, which is not significant. Neither the subjects nor the experimenter scored significantly when their data were treated separately. Null results were also obtained from analyses for salience (initial and terminal), for significant grouping of hits (runs of three, four, five, etc., successive hits), and for abnormal run-score distributions (preponderance of extreme scores).

Both the subjects' ESP scores and the experimenter's ESP scores were correlated with the PK score obtained at the same session. In the first case the correlation coefficient was + .12; in the second case it was — .20. Neither is significant.

Before dismissing the ESP results as being entirely without interest, however, it may be permissible to call attention to a "chronological decline effect" which appears in the ESP data. Reference to

Appendix III will show that at the half-way point of the experiment (*i.e.*, when twenty-seven out of the fifty-four sessions had been completed) the total deviation on the 324 decks called was plus 100. This yields a CR of 2.78, which is significant. Of this positive deviation the subjects contributed 48 units and the experimenter 52. At this half-way point the experimenter, yielding to temptation, stopped and added up both the subjects' and her own ESP scores. It happened that Dr. Murphy was ill at the time, and the experimenter wrote him that "if the ESP scores continue at this rate we will have hit the jackpot . . ." or words to that effect.

It has been thought by a number of investigators that it is "bad magic" to do statistical work before the completion of an experimental series ("don't count your chickens before they are hatched"), and this proved to be the case. The second half of the series fell to pieces, yielding a deviation of *minus* 30. The subjects contributed 24 units and the experimenter 6 units to this negative deviation. The CR of the difference between scoring rate in the two sections of the experiment is 2.55 (P= .005), which is significant. On the other hand, this probability value must be taken with a grain of salt in as much as it derives from a division of the data which was not specified in advance. This division, in fact, may seem quite arbitrary and indefensible to some readers, although it does not seem so to the experimenter. Finally, it may be pointed out that the PK data show no "chronological decline effect," nor were the PK scores tallied up, as were the ESP scores, at the end of the 27th session.

Discussion: Despite the fact that *objective* experimental conditions (equipment, number of dice thrown simultaneously, male and female subjects of college age, etc.) were similar in Series I and Series IIc, the results of the latter series did not confirm those of the former. The principal *psychological* variable may have been the attitude of the experimenter. The first series was undertaken in a spirit of adventure; there was intense curiosity to see whether or not the Duke results would be repeated under the conditions specified. Series IIc, on the other hand, was undertaken, as it were, from a sense of duty, and the experimenter's morale was low after the failure of Series IIa. She felt "morally obligated," however, to attempt to repeat the earlier experiment from which positive results had derived.[4] Major interest from her point of view focused upon the ESP task, which provided something new in the test situation. One other factor may also be mentioned—even at the risk of sounding as if an alibi were being put forward! In a three-weeks' period the experi-

[4] It should be noted, however, that in spite of very high morale indeed at the inception of Series IIa, in which the distance factor was tested, the results were of a chance nature.

menter worked with over seventy individual subjects, each session lasting from an hour to an hour and a half. (Series IIc, though chronologically later than IIb, did overlap to a certain extent with IIb.) It is believed by the experimenter that such intensive work, resulting quite naturally in fatigue and strain, is not conducive to the best results.

Summary

Between May and December, 1946, three extensive series of PK tests were undertaken in which 132 subjects performed a total of 76,032 die throws. No clear evidence for the operation of psychokinesis was found in any of the series. It is hoped, however, that this detailed report will be of some value to future investigators in highlighting certain research problems which still remain unsolved.

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Appendix I

PK Series IIa. Total scores and deviations obtained by the twenty-four subjects on their six record sheets. A score of ninety-six is expected by chance. Subjects marked with an asterisk had taken part in the first PK series. "D" indicates the distance condition, "SR" the same-room condition.

Subject Number	Variable	Total Score	Dev.	Total Score, First Throw	Total Score, Second Throw
* 1	D	94	— 2	43	51
* 2	SR	97	+ 1	38	59
* 3	D	101	+ 5	54	47
* 4	SR	91	— 5	44	47
* 5	D	94	— 2	45	49
* 6	SR	102	+ 6	57	45
* 7	D	94	— 2	47	47
8	SR	92	— 4	44	48
9	D	102	+ 6	44	58
*10	SR	113	+17	55	58
*11	D	90	— 6	43	47
*12	SR	90	— 6	45	45
*13	D	102	+ 6	55	47
14	SR	90	— 6	46	44
15	D	91	— 5	43	48
16	SR	105	+ 9	51	54
*17	D	100	+ 4	52	48
18	SR	98	+ 2	51	47
*19	D	89	— 7	50	39
*20	SR	91	— 5	44	47
*21	D	87	— 9	42	45
*22	SR	97	+ 1	42	55
23	D	93	— 3	44	49
24	SR	96	± 0	57	39

Appendix II

PK Series IIb. Total scores and deviations obtained by the fifty-four subjects on their six record sheets (24 runs). A score of ninety-six is expected by chance. All women subjects.

Subject Number	Total Score	Dev.	Subject Number	Total Score	Dev.
1	111	+15	28	98	+ 2
2	97	+ 1	29	107	+11
3	88	— 8	30	110	+14
4	105	+ 9	31	102	+ 6
5	74	—22	32	105	+ 9
6	89	— 7	33	106	+10
7	107	+11	34	96	± 0
8	92	— 4	35	99	+ 3
9	94	— 2	36	90	— 6
10	94	— 2	37	106	+10
11	77	—19	38	86	—10
12	92	— 4	39	78	—18
13	94	— 2	40	99	+ 3
14	93	— 3	41	89	— 7
15	99	+ 3	42	85	—11
16	99	+ 3	43	93	— 3
17	110	+14	44	88	— 8
18	91	— 5	45	84	—12
19	99	+ 3	46	100	+ 4
20	75	—21	47	105	+ 9
21	100	+ 4	48	91	— 5
22	87	— 9	49	96	± 0
23	103	+ 7	50	91	— 5
24	89	— 7	51	87	— 9
25	110	+14	52	90	— 6
26	94	— 2	53	99	+ 3
27	99	+ 3	54	81	—15

Appendix III

PK Series IIc. Total scores and deviations obtained by the fifty-four subjects on their six PK sheets (24 runs), subjects' ESP scores and deviations, experimenter's ESP scores and deviations, and total ESP deviations.

Subject Number	Sex	PK Scores	Dev.	Subjects' ESP Scores	Dev.	Experimenter's ESP Scores	Dev.	Total ESP Deviation
1	F	87	— 9	31	+ 1	31	+ 1	+ 2
2	M	94	— 2	28	— 2	37	+ 7	+ 5
3	M	92	— 4	19	—11	30	± 0	—11
4	F	107	+11	31	+ 1	31	+ 1	+ 2
5	F	99	+ 3	42	+12	36	+ 6	+18
6	F	76	—20	23	— 7	34	+ 4	— 3

Subject Number	Sex	PK Scores	Dev.	Subjects' ESP Scores	Dev.	Experimenter's ESP Scores	Dev.	Total ESP Deviation
7	M	82	−14	27	− 3	23	− 7	−10
8	F	110	+14	36	+ 6	24	− 6	± 0
9	F	87	− 9	33	+ 3	39	+ 9	+12
10	M	103	+ 7	35	+ 5	31	+ 1	+ 6
11	F	91	− 5	31	+ 1	36	+ 6	+ 7
12	F	91	− 5	30	± 0	42	+12	+12
13	F	111	+15	40	+10	23	− 7	+ 3
14	F	102	+ 6	28	− 2	29	− 1	− 3
15	F	100	+ 4	27	− 3	37	+ 7	+ 4
16	F	103	+ 7	28	− 2	28	− 2	− 4
17	M	85	−11	34	+ 4	33	+ 3	+ 7
18	M	100	+ 4	38	+ 8	28	− 2	+ 6
19	M	96	± 0	30	± 0	33	+ 3	+ 3
20	F	87	− 9	36	+ 6	33	+ 3	+ 9
21	F	86	−10	26	− 4	27	− 3	− 7
22	F	86	−10	24	− 6	34	+ 4	− 2
23	M	86	−10	37	+ 7	40	+10	+17
24	F	95	− 1	37	+ 7	34	+ 4	+11
25	F	99	+ 3	35	+ 5	39	+ 9	+14
26	F	93	− 3	37	+ 7	23	− 7	± 0
27	M	106	+10	35	+ 5	27	− 3	+ 2 *
					(+48)		(+52)	(+100; CR:2.77)
28	M	89	− 7	32	+ 2	28	− 2	± 0
29	F	108	+12	24	− 6	28	− 2	− 8
30	F	101	+ 5	30	± 0	35	+ 5	+ 5
31	F	92	− 4	33	+ 3	33	+ 3	+ 6
32	F	104	+ 8	29	− 1	32	+ 2	+ 1
33	F	99	+ 3	23	− 7	31	+ 1	− 6
34	M	113	+17	29	− 1	32	+ 2	+ 1
35	M	86	−10	29	− 1	21	− 9	−10
36	F	98	+ 2	33	+ 3	36	+ 6	+ 9
37	F	98	+ 2	38	+ 8	27	− 3	+ 5
38	M	106	+10	28	− 2	29	− 1	− 3
39	M	94	− 2	23	− 7	26	− 4	−11
40	F	91	− 5	27	− 3	23	− 7	−10
41	F	83	−13	37	+ 7	41	+11	+18
42	M	84	−12	31	+ 1	32	+ 2	+ 3
43	M	93	− 3	30	± 0	24	− 6	− 6
44	F	91	− 5	28	− 2	33	+ 3	+ 1
45	M	103	+ 7	31	+ 1	25	− 5	− 4
46	M	105	+ 9	29	− 1	31	+ 1	± 0
47	F	97	+ 1	32	+ 2	25	− 5	− 3
48	F	106	+10	23	− 7	28	− 2	− 9
49	M	102	+ 6	33	+ 3	38	+ 8	+11
50	M	97	+ 1	17	−13	25	− 5	−18
51	F	94	− 2	28	− 2	32	+ 2	± 0
52	M	93	− 3	30	± 0	31	+ 1	+ 1
53	M	91	− 5	29	− 1	28	− 2	− 3
54	F	90	− 6	30	± 0	30	± 0	± 0
					(−24)		(− 6)	(−30; CR:−.83)

* This division of the data at the halfway point in the experiment is discussed on pp. 77-78.

Unusual Experiences

In the July, 1946, issue of this JOURNAL we presented for the first time a series of "unusual experiences"—experiences which did not lend themselves to publication under the heading of "Cases" either because (a) although giving *prima-facie* evidence of paranormality, they lacked independent corroboration, or because (b) they gave no evidence whatever of paranormality (but were considered worth putting on record because of their unusual psychological interest). The experiences presented in this issue are of the type that give evidence of paranormal factors, but no corroboration is possible.

The first account comes to us from a Member, Mr. MacKinlay Kantor, the well-known author. Mr. Kantor experienced some "haunting" phenomena while spending the night in a London rooming house. The episode occurred during the night of April 20th-21st, 1945. The next day Mr. Kantor made a brief note concerning the experience in his diary. On April 22nd he described the experience in detail to a friend, Captain Francis H. Beaugureau, of the 305th Bomb Group, and on April 27th he again discussed it with two other friends, Colonel Philip Cochrane and Colonel "Micky" McGuire, of the U. S. Army Air Forces. Mr. Kantor made notes of these conversations in his diary, which he kept regularly at the time. He has been good enough to show us this diary, and we have seen all the entries relevant to the experience about to be reported. Finally, during June of the same year, upon his return to America, Mr. Kantor dictated to his secretary a very detailed account of the episode. His account follows:

My first acquaintance with the room came on the afternoon of Tuesday, April 10, 1945. The 364th Squadron of the 305th Bomb Group (H), with which I was flying at the time, had been "stood down" (taken off Operations) for a couple of days, so I decided to go up to London for a brief holiday. Major J. J. Kostal of Chicago went with me. Together we applied for rooms, and together we were directed by the billeting officer to No. 40 Truxley Court, in the south end of Kensington.[1] The lodgings were in fact two houses, No. 40 and No. 42, tan-colored Victorian structures remodeled as a single lodging house. One could enter either at No. 40 or 42; there was a passage cut through on the first floor. The landladly was Mrs. Effie Stuart (pseudonym).

Mrs. Stuart at first seemed doubtful whether she could find rooms for us. She was quite full up, she said, and all the rooms on the

[1] In order to protect the landlady from possible embarrassment, a fictitious address has been used. The true address and the actual name of the landlady have been given to us by Mr. Kantor and are on file at the Society.

third and fourth[2] floors were filled. Finally, however, she assigned Kostal to a single room on the second floor at the side of the house, and then took me around to the front of the house on the same floor, where she hesitated before an open door. (This was in fact the second story and a half. There was a peculiar construction to these houses. The rear portion on every floor, except the first, was half a flight below the front portion of the house.) Mrs. Stuart looked at me inquiringly. "This is the only room I have left," she said. "It's very small, I know."

She was correct. The room was about ten or twelve feet in length and certainly not more than seven feet wide. Actually it was a continuation of the hall itself, apparently walled off by some earlier generation in order to make an extra sleeping-room. Later familiarity with the premises showed that the same plan followed on the first floor, below, and on the third and fourth stories (see footnote 2) above. In each case there was a little hall bedroom walled off at the front—a narrow room with one window looking down on the springtime trees of Truxley Court. I recall thinking it odd that the elderly folk who tenanted the place should prefer to live in third or fourth floor hall bedrooms rather than on the second floor. They would only have had to climb one flight and a half of stairs in order to reach the room where Mrs. Stuart was putting me, yet this room remained untenanted.

A wide hall door, fastened by a modern spring lock, filled about half the north wall of the room; the other half was occupied by the head of a studio couch, with a heavy spread and a lot of daytime cushions. The couch-bed took up a good share of the floor space, its head against the north wall next to the door, its right side against the west wall of the room. Beyond the foot of the couch, on the south wall next to the one big window, was a hall tree where clothing could be hung. A low table stood in front of the window. Well down the east wall was a desk of the secretary type. For the rest of the room's furnishings there were only two chairs.

As it turned out, I did not after all spend the night at No. 40 Truxley Court. I stayed with friends in Hampstead, quite unexpectedly, and returned to the rooming house next day to pick up my bag. I ran into Kostal, and he said that he had spent a comfortable night in his room on the second floor, side. I left London, and Truxley Court slipped from my mind. On the afternoon of April

[2] Mr. Kantor, in discussing his experience with us, said that he was not now entirely certain that there was a "fourth" floor; that is, that there were *two* hall bedrooms above his, although he thinks that this was probably the case. Understandable confusion may have resulted from the "half stories" peculiar to the construction of this house as well as from the English method of numbering floors, which differs from the American system.

20th, however, I found myself back in London. I was working for USSTAF, and they had flown me suddenly over to Britain from France, to consult with an 8th Air Force officer. It was necessary to find lodgings for the night, and Truxley Court came to my mind. Mrs. Stuart said she had but one vacant room and that she would give it to me for the night. It was that same second story front hall-bedroom. How fortunate, said Mrs. Stuart, that it hadn't been taken by someone else!

I had dinner with my friends, and returned to my room before eleven. The maid had not turned down my bed, so I took off the cover and folded it on a chair. The bed was now revealed, completely made up: sheets, one blanket, and a neat comforter of puckered sateen. No one else seemed to be abroad in that house, not even at eleven. I locked the door, turned off the light, opened the window, and looked into the grey night before I got into bed. There was part of a moon, but it was hidden under misty clouds. I slept soundly until the small hours, then awoke, rose, turned on the small light on the desk top, and opened the door. I went into the hall and down the half flight of stairs to the bathroom at the second-floor rear. There were no signs of human activity in the house. On the way back to my room I looked at my wrist watch. It was six minutes after three, and the house was very quiet; so was all of London. I couldn't hear a sound in the tired, hammered city that spread away beyond those walls. In the bedroom, I closed the door and heard the spring lock snap (I distinctly remember that sound of the snapping lock). I turned off the light, raised the window a couple of inches higher, and crawled into bed.

I didn't go back to sleep. About the time I was settled—turned on my right side in the smooth, narrow bed, the way I habitually sleep—I suddenly became aware that someone (or something) was trying to pull the covers off me. For a moment I just lay there and took it. I couldn't believe it. The covers—comforter, blanket, and sheet—were all sliding slowly and steadily toward the foot of the bed. It was a gentle but persistent and sturdy pressure which took them there. For a long moment I thought that in some peculiar manner I must have wound my foot in the bedclothing, and that somehow the weight and pressure of my foot were dragging the covers. It was nonsensical, and in the same moment that I evolved the theory I rejected it. I sat up and looked toward the foot of the bed. There was nothing there.

The room shone soft and grey in light from the wide-open window. I could see the desk, the hall tree, and the chairs; I could make out their dull shapes in the gloom. The covers were still being pulled toward the foot of the bed, and no visible entity was pulling them.

Reaching down with both hands, I got a good grip, tangling my fingers in sheet and blanket and comforter all together, and I hauled the covers back up. Even as I did this, I felt a certain pressure fighting me all the time I drew on the fabric. I think I then began to realize that this was something peculiar to the hour and the place. I had slept in hundreds of beds in many different countries, but never before had I had an experience like this. And the thing which amazed me most was the fact that I wasn't really frightened. I was merely angry. Some force was trying to drag those covers off me, and I resented that force deeply.

Four times, when I relaxed my grip, the covers started down again; each time I think that it was with greater strength and rapidity. Four times I grabbed them and brought the sheet and comforter up around my shoulders again. Then I remember thinking, "This has gone far enough. If you want to get those covers again, you're going to have to take me with them." All this time, I must add, there hadn't been a sound. There wasn't a whisper in that room except for the ripple of fabric, the swishing of cloth as it was drawn down across my rayon pajamas, and the sound of the gasp and grab I made when I pulled the covers up again.

After the fourth onslaught, I dragged the whole mass of bedclothing up against increasing pressure, and locked the stuff around me. I shoved one side of the comforter under my left shoulder, rolled almost over on my face, jammed more bedclothing in behind me, and rolled back again. In addition to this, I hung on to the top margin of all three bed garments. The only way the force could drag the covers down was to drag me with them! But almost as soon as I relaxed my grip or shifted my weight, however slightly, the covers started to go again. The attempts came not in a sly or jerky motion, but with a dull pressure—like the power of inertia. I just lay there and hung on.

Lying in this fashion, on my right side, with my face turned toward the west wall of the room, I became aware that the wall had grown very bright. My first thought was that the moon had broken through the clouds outside and was shining through the window. I lifted my head slightly to observe the window, and found that it was dark; there was no moonlight. I turned over in bed, still holding the covers tightly, and discovered that the *east* wall was intensely bright. The light which I had seen on the west wall was reflected from the opposite wall on the east.

This brightness of the east wall, witnessed by me as I stared from my bed, became (within not more than five minutes after I had first observed it) as white as milk. Then the whiteness seemed to turn to a kind of luminescence. The best way I could describe

the phenomenon is to say that it looked like the mysterious wavery flare of a radium compound: the radium paint which seems to wink and recede and come near again, when you gaze at a luminous wristwatch in the dark. All over that wall, in a rough pattern covering perhaps thirty square feet, the light was flowing and brightening. The brightness occurred from a point about five feet above the floor, down nearly to the floor itself, and in an over-all space probably six or seven feet in length. As the brilliancy increased, so did the *area* of light lessen. It seemed to shrink in, more or less, from all four corners of the patch that was roughly rectangular. There was now (within, as nearly as I can judge, ten minutes from the time I first discerned the light) a kind of misshapen core of whiteness. It was flat. It didn't seem to stand out from the wall—neither the core nor the area of discernible light that surrounded it. But a mass of brilliance was slowly taking shape.

I had begun to hear sounds—perhaps *a sound* would be correct. It was more like a murmur of distant voices than anything else I can think of now or could think of then: voices of a number of human beings. Those distant people seemed to be speaking or wailing or laughing rapidly, but they seemed incredibly far away. Such a babble might be noticed if one stood at the far end of a large house, and heard a party and a funeral simultaneously in progress in rooms on another floor and at the opposite end of the house. Most assuredly I could hear voices. I knew that they were the utterances of human beings, that there were many in number, and that their hullabaloo ran from caterwauling through speechifying and gossip to honest laughter. But I wasn't able to recognize even one word that they were saying. I noted that *the audible phenomena increased in direct ratio to the increase in the intensity and centralization of the light on the wall.* The brighter the luminescence, that is, the more high-pitched and sturdy and discernible the voices, the more nearly could I *almost* hear what they were saying.

Almost—but not quite. I could not honestly identify a single word which I heard, yet indeed they were words and I think spoken in English. Certainly there was laughter. Certainly I heard remotely the sound of sobbing; and more than these—lying over them in sound, as frosting covers a cake—was the bickering chatter of little voices, men and women gabbling, interrupting one another, prattling of things which must have been petty in the extreme if they could be recited with such careless rapidity.

As I stared at the core of light on the wall, it began to assume a more specific shape. I am confident that the flow of light—or rather, of luminous material—was casting itself in the mold of a man or a woman. There was one moment when I perceived this: I think

that I saw a head and shoulders and the upper part of a body, but whether of a man or woman I cannot say.

Throughout this whole performance observed by my eyes and my ears, I was resisting mutely. I remember saying to myself: "I won't believe you, I must refuse to look at you, to hear you. I am stronger than you. I will resist! You cannot overcome me. You cannot *make me* hear you or see you." I may not have thought these words, precisely, but certainly such resentful thoughts were flowing through my mind as I gazed and listened.

Then on the instant when I became aware that a head and shoulders and body were taking shape against that empty east wall, I almost spoke the thought aloud—perhaps I did speak it aloud: "Oh, I get the idea! I know what you want. You *want* me to *look* at you and *listen* to you. Well, I won't. You can't make me." With a heave, I rose to a half-sitting position, still wrapped in the covers, still gripping them with my hands. I flung myself on my right side, with my face turned away from the east wall. I lay with my weight pinioning the crumpled bedclothes on my right side, and with my left elbow locking a mat of sheet and blanket and comforter against my body. I was not looking at that wall any longer, and the garbled voices began to fade from my ears. Eventually I fell asleep.

When I awoke in the morning I found that I had pressed the sheet and comforter with such fury that there were hundreds of complex little wrinkles in the cloth—as firmly pushed into the texture of the goods as if an iron had pressed them there. The door was still locked, and the east wall was as empty as very ordinary wallpaper could make it. I do not of course pretend to know what was going on in the room that night; but I do know, however, that I was neither sick, drunk, nor having a dream or nightmare. Although the cumulative effect of my experience while it was going on was to make me feel angry and defiant rather than terror-stricken, I should not care to spend a night alone in that room again.

Finally, at breakfast Mrs. Stuart came up to my table, gave me a long look, and asked me if I had slept well. I told her that I had.

MacKinlay Kantor

Mr. Kantor has been kind enough to give us some additional information relevant to his experience. In answer to a question relating to the length of time that elapsed between his first awareness of the light upon the east wall and the beginning of the auditory effects, he answered: "Unfortunately I cannot relate with admitted accuracy the time sequence of visual and auditory phenomena. It is my impression, however indistinct and confused, that I was aware

of the light upon the wall for several minutes at least before I recognized the activity of auditory occurrences."

When asked for more information as to how long the entire experience lasted, Mr. Kantor replied: "According to the most capable estimation I can offer, both the auditory and visual phenomena (as typified by the distant mutter of voices and the reflected light on the west wall) decreased, within ten or twelve minutes after I turned away from the east wall, to a point where I was no longer aware of them. The pressure on the bedclothes continued for a time; there was a noticeable tension, and a disposition of the bedclothes to slide toward the foot of the bed, which could be discerned whenever I relaxed my grip for more than a few seconds. Therefore I hung on tightly, with my hands squeezed on the fabric. I went to sleep with my hands solidified in a violent clutch; when I slept, it was from pure exhaustion. My assumption is that I retained consciousness for approximately half an hour after I turned over to avoid the seeming appearance of an apparition on the east wall. The phenomena connected with the bedclothing started shortly after three o'clock—I looked at my watch when I returned to my room. I believe, although I did not again look at my watch, that I probably fell asleep between four and four-thirty. So the entire experience lasted, to the best of my knowledge, from an hour to an hour and a half. It may be of interest to note here that when I woke up the following morning my hands were strained, slightly swollen, and gave me considerable discomfort. On one other occasion only have my hands ever felt like that: that was once in Florida when, armed with light bass tackle, I battled a sixteen-pound redfish for forty-seven minutes. That time I immersed my hands in sea water to relieve the ache."

Unfortunately Mr. Kantor left England very shortly after the night which he has described, and he had no opportunity to make inquiries of the landlady or others as to whether or not the room had a prior history of being "haunted." (Mr. Kantor has explained to us that when the landlady asked him next morning if he had slept well, he answered almost automatically that he had. To have said that he had slept very badly indeed would have been to involve himself in giving an account then and there—in a dining room filled with strangers eating their breakfasts—of a very complicated and personal sort of experience.) There seem, however, to be some indications that the room may have had a history: Although London was crowded at the time and rooms were at a premium, this particular room was empty on two occasions; although elderly people were living in the house, they tenanted similar rooms on the floors (or floor) above when Mr. Kantor's room would have

required less stair-climbing; moreover, the history of the bombing-out of upper floors had made rooms on lower floors very desirable; finally, there is the curious attitude of the landlady in her seeming reluctance to rent the room. It is Mr. Kantor's belief, based on his observance of this attitude, that the landlady was *afraid* to let him have the room, but that finally her natural desire to turn an honest penny overcame this fear.

In conclusion, Mr. Kantor has told us that he had never before had a clear-cut psychical experience. He had read one or two books on poltergeist and related phenomena, but did not believe in the reality of such experiences.

The second account of an unusual experience was also sent to us by a Member, Miss Muriel Symington. Miss Symington, who has been a subject in a number of our experiments in extrasensory perception, reported a somewhat similar experience several years ago, and this was published in the JOURNAL, issue of October, 1944, pp. 122-124. Miss Symington writes as follows:

December 15, 1946

About 3:20 P.M. on Saturday afternoon, December 14th [1946] I was waiting for a street car to take me about five blocks to a transfer point. I saw the oncoming car discharging passengers one block away from where I stood. The motorman apparently saw me waiting and ran the block without picking up speed, making it obvious to any motorist that the street car was stopping. As I stepped out from the curb I gave the usual glance up the street, not having any faith in the right of way which is allegedly the pedestrian's in such a situation. No automobile was in sight. I stepped out close to the car track and just as the door opened to admit me an automobile which had apparently turned in from a side street a block away whizzed by me at a good speed—though possibly a perfectly legal speed on a clear road—and so close to where I stood that had I shifted my position an inch or two it would certainly have caught me. I got on the street car without comment and the motorman said, "Gee, Miss, that was a close one," and shook his head. When I say that no automobile was in sight, I mean that at the moment I looked the car had not yet turned into the main street where the trolley line ran.

Luckily the street car didn't have to stop until it was halted by a long red light at my transfer point, a busy thoroughfare. I got out and went over to where the offending car had also been stopped by the light (I had noticed the color and make of this car and there was no possibility of error on my part). I took its license number, MD ——, and then stepped up to the car and tapped on the glass to attract the attention of the driver. He glanced at me and then looked straight ahead. I said, "Did you realize what you did a block or two back?" He made no reply, nor did he look at me again; at that point the lights changed and he drove on. Naturally I was angry, and as the car moved I called out, "Looking for business, doctor?"

I was shocked by my narrow escape and furious with what I assumed to be the doctor's deliberate rudeness on top of his carelessness. I was on my way to dine with a friend and I began to figure what steps I should take to make him "rue the day." Having decided what to do, this sentence flashed into my mind out of the mental sub-cellar of my unconscious: "That will settle *your* hash, Dr. Schultz!"[3] Then I found myself startled and ashamed over endowing the object of my wrath with a foreign name and I cursed myself for being nothing more than a chauvinistic snob. The odd thing is that the driver's appearance was in no way indicative of foreign origin. When I reached my friend's home I told her the story of my narrow escape, but I was too ashamed to tell her that I had endowed the doctor with a name (I did tell her subsequently, but too late as far as evidence is concerned).

This morning [December 15th] I went to a nearby police station to lodge a complaint. The desk sergeant heard my story, took down the license number, and then called up the bureau to obtain the motorist's name. I was stupefied when the sergeant spelled out the name as he received it over the phone: S-C-H-U-L-Z. The only difference was that my mind had yielded a "t" which was not actually in the doctor's name.

Although I should not wish to offer any interpretation of my experience, it does seem that this approximation of the name is difficult to attribute to chance coincidence; hence I am submitting the account to the Society. Perhaps I should add that I have never been acquainted with anyone named either Schultz or Schulz; and what is more, my

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[3] For obvious reasons a pseudonym has had to be substituted for the actual name of the doctor, and therefore it was also necessary to change the name which flashed into Miss Symington's mind in relation to the driver of the car. The real name of the doctor is a somewhat less common one than "Schultz," and Miss Symington's impression was correct except for a single vowel.

conscious mind would repudiate the idea of indicting any individual German for the crimes of his country.

MURIEL I. SYMINGTON

Miss Symington has asked us to add here that she wrote Dr. "Schulz" advising him of her intention to take the matter up in Traffic Court and that she subsequently received "a very courteous letter from him apologizing for his carelessness and stating that when I tapped on the glass to attract his attention he had not recognized me as the pedestrian involved, but thought it was a stranger trying to 'bum' a ride."

Lecture and Tea

The final Lecture and Tea of the current season will take place at the Rooms of the Society on Wednesday, April 23rd, at 4 P.M. Dr. Gardner Murphy will be the speaker and his topic is: "Precognition as a Problem for Psychical Research, Psychology, and Philosophy."